

CURRENT HISTORY

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Current History

OCTOBER, 1985

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Mikhail Gorbachev is the third man to rule the Soviet Union since Leonid Brezhnev died in 1982. This issue explores some of the areas demanding Gorbachev's attention and discusses the prospects for change. Our lead article points out that with "Gorbachev's innate ability, rapidly accumulating power [and] frank diagnosis of Soviet problems . . . it is conceivable that he will eventually attempt basic economic reforms that might improve the lot of the long-suffering Soviet people and make the Soviet Union a more effective adversary of the United States. . . ."

The Soviet Union under Gorbachev

BY TIMOTHY J. COLTON

Director, Center for Russian and East European Studies, University of Toronto

FOR its first 65 years, the Soviet Union lived under only four political bosses; on March 11, 1985, it acquired its third new leader in 28 months. The two previous General Secretaries of the Communist party of the Soviet Union, Yuri V. Andropov and Konstantin U. Chernenko, proved to be interim leaders. The new party chief, Mikhail Sergeevich Gorbachev, is only 54 years old. Gorbachev is a full political and biological generation younger than Andropov, Chernenko, and President Leonid I. Brezhnev, the durable Soviet patriarch whose death in 1982, after 18 years in power, ended an era in Soviet politics and inaugurated the unprecedented turnover in leaders in 1982–1985. If Gorbachev lives as long as his predecessors and if, like them, he dies in office, he will hold office until the year 2004. Do the first few months of his tenure offer any clues to the era to come?

The easiest phase of Gorbachev's ascent to power was probably the period before Chernenko's death. According to Foreign Minister Andrei A. Gromyko, who nominated Gorbachev as General Secretary at the Central Committee session of March 11, 1985, Gorbachev had been acting as an unofficial stand-in for the ailing Chernenko. Gorbachev, Gromyko maintained, had not only been directing the Central Committee Secretariat, the party's main administrative body, but had been "brilliantly" chairing sessions of the policymaking Politburo in Chernenko's absence.¹ It is hard to tell how much of this was public relations, since Gromyko took pains to underline not only Gorbachev's own strengths and acumen but what was portrayed as the "unanimous opinion"

of the Soviet rulers on the selection of the new leader and the smoothness of the transition. Whether the oligarchy was of one mind or not, there is no reason to question the essence of Gromyko's statement, namely, that Gorbachev had been functioning as heir-apparent and had thoroughly outmaneuvered the other contestants for the top prize.

There was much about Gorbachev and the conditions of his arrival that buoyed expectations of changes in the Soviet regime. Relatively young, healthy, urbane and candid about the Soviet Union's internal shortcomings, Gorbachev seemed an appealing representative of the rising cohort of Soviet politicians kept in the wings by the old guard associated with Brezhnev. Born in 1931, the same year that Brezhnev, Chernenko and Gromyko joined the party as adults, Gorbachev was initiated into political life in the 1950's, around the time of the death of the dictator Joseph V. Stalin and the beginning of Prime Minister Nikita S. Khrushchev's disruptive reforms. His educational credentials—a law degree from the country's leading university and an agricultural diploma earned later—surpass those of all previous Soviet leaders. Gorbachev began his career in the party's youth league, Komsomol, and made a name for himself in the 1970's as party first secretary in his native region of Stavropol, an important grain-growing area in the south of Russia. In 1978, the backing of Brezhnev and perhaps other protectors in Moscow propelled him into the position of national party secretary in charge of agricultural and rural affairs. In 1980, at the tender (by Kremlin standards) age of 49, he was appointed a full member of the party Politburo.

When Yuri Andropov took over from Brezhnev in 1982, Gorbachev's star shone still brighter. Within half a year he became Andropov's chief aide for party personnel

¹"Rech' tovarishcha A. A. Gromyko na Plenum TsK KPSS 11 marta 1985 goda," *Kommunist*, no. 5 (March, 1985), p. 6.

and organizational matters, and there seems little doubt that Andropov was grooming Gorbachev to succeed him. Gorbachev was directly involved in Andropov's attempt to purge officials judged to be aging, corrupt or inept, and to breathe life into the sagging Soviet economy.

Andropov's early death in February, 1984, and the temporary triumph of Chernenko, formerly Brezhnev's closest protégé in the leadership, may have been a blessing in disguise for Gorbachev. Gorbachev used the interval to buttress his patronage base and to heighten his political stature by delivering major speeches, by making a well-publicized trip to Britain, and in general presenting himself as an energetic alternative to the weary old-timers around Chernenko. While there were other candidates qualified to succeed Chernenko—party secretary Grigori V. Romanov, 62, and long-time Moscow party boss Viktor V. Grishin, 71, were the most plausible—no serious challenge to Gorbachev was mounted.²

Public disenchantment with the inertia of the late Brezhnev period (an inertia recreated almost in caricature under Chernenko), coupled with the memory of Andropov's fumbling moves toward internal reform, gave Gorbachev an opening—indeed, a mandate—to press ahead with policy innovations, particularly in the economy. His chance of successfully embarking on such a course was enhanced by other circumstances. The twenty-seventh party congress was scheduled for the spring of 1986, and the Andropov leadership had decided in 1983 to place changes in the party's formal program and rules on the congress's agenda. Moreover, the ranks of the gerontocracy within the leadership had at long last been thinned by natural, if not political, causes. Six core members of the Brezhnev leadership—Aleksii N. Kosygin, Mikhail A. Suslov, Brezhnev himself, Andropov, Dmitri F. Ustinov, and Chernenko—had died since 1980, and by March, 1985, the Politburo had shrunk to only 10 voting members, the smallest number in decades.³ It was emblematic of the near paralysis of power affecting Chernenko that not a single change was made either in the Politburo or the Secretariat.

It is in the area of leadership style that Gorbachev has wrought the most noticeable change. The shift could

hardly, under Soviet conditions, be more dramatic. After being governed for years by virtual invalids, Soviet citizens now have a party leader who can climb stairs without assistance, put in a normal day at the office, commit himself to meetings with foreigners at prearranged times, deliver a speech clearly, forcefully and (on occasion) without note cards, and glad-hand with officials and members of the public. The new leader, moreover, far exceeds even Andropov at his most pungent in his calls for decisive measures to accelerate the economic and social modernization of the Soviet Union.

It is the provocative and populist dimension of the Gorbachev style, reminiscent in some ways of Khrushchev in his heyday but less impulsive and more tailored to television, that contrasts most sharply with the style of his predecessors. Gorbachev's style first came to the fore in mid-April, when he spent two days touring the main industrial zone of Moscow. Here he dropped in on factories, a store, a hospital, and a housing estate, querying people at each stop and commenting on problems.

In late June, Gorbachev traveled to the Ukraine, where he spoke animatedly of the need to accelerate economic growth as a problem affecting "the fate of our country." "The question might arise," he told metal workers in Dnepropetrovsk, "of whether we are not making too sharp a turn." Not so, he said. "The other approach would be more peaceful, but it does not suit us. The time dictates that we act exactly this way."⁴

Changing the composition of the top leadership is one way for Gorbachev to begin translating words about change into actions and to boost his own power in the process. Here Gorbachev has made impressive strides. At the first regular plenum of the Central Committee after Chernenko's death, no fewer than three newcomers were added to the voting membership of the Politburo; an additional candidate member and a new secretary responsible for agriculture were also appointed as nonvoting members. The three new Politburo members have been recruited into major administrative posts by Gorbachev's mentor, Andropov. They are Yegor K. Ligachev, the secretary directly responsible for organization who had his portfolio broadened to take in ideology and foreign policy; Nikolai I. Ryzhkov, the secretary overseeing economic policy; and Viktor M. Chebrikov, the head of the KGB (the Soviet political police and intelligence service), who served for 15 years as a deputy to Andropov in that agency.

The next Central Committee plenum, on July 1, brought further developments. The prickly Romanov, Gorbachev's most dangerous rival until March and still the secretary responsible for national security and the defense industry, was unceremoniously dropped from all his positions. The Central Committee communiqué claimed that Romanov had requested retirement "on account of the condition of his health," but the absence of even a word of praise made it plain that it was Romanov's political health that had failed.⁵ The July plenum el-

²The strongest hint of Gorbachev's strength, apart from Gromyko's comments, was the timing of events. Gorbachev's appointment as General Secretary was announced several hours after the news of Chernenko's death, in contrast to the several days following the deaths of Brezhnev and Andropov. In a sharp break with precedent, the Soviet newspapers of March 12 gave top billing to Gorbachev's accession and relegated Chernenko's death to page 2.

³In addition, Arvid Ia. Pel'she, a relatively unimportant member of the Politburo, died in 1983. Andrei P. Kirilenko, a former favorite of Brezhnev who fell out of grace, was retired, ostensibly for health reasons, the previous November.

⁴*Pravda*, June 27, 1985, p. 1.

⁵*Ibid.*, July 2, 1985, p. 1. A number of less powerful figures entering retirement have been publicly thanked by the Politburo for their services, and Kirilenko, the last member of the Politburo to exit for health reasons, received such praise.

vated to the Politburo the reform-minded party leader of the southern republic of Georgia, 57-year-old Eduard A. Shevardnadze, and it named two new party secretaries to share Romanov's previous duties. In a truly astonishing move, the next day Shevardnadze was made minister of foreign affairs, even though he has no direct experience in foreign affairs or in administrative work at the national level. Gromyko, 76, the foreign minister since 1957, remained in the Politburo but was named President (Chairman of the Presidium of the Supreme Soviet), thereby losing his stranglehold over foreign policy decisions.

MOVING INTO COMMAND

In a few short months Gorbachev has acquired a commanding position within the inner leadership, and he has done so more quickly than any General Secretary since the 1920's. He was able to win the approval of the 10-man Politburo upon Chernenko's death, helped no doubt by the three men who attained full membership under Andropov.⁶ That body now has 13 members, 4 of whom have been promoted under Gorbachev's aegis. Romanov has been pensioned off—a move that, whatever the exact nature of Gorbachev's relations with Romanov, will signify to many Soviet citizens that the new General Secretary has political will and muscle—and Gromyko has been pushed into semiretirement, his office given to a foreign policy neophyte beholden to Gorbachev and wedded to his domestic line.

The three new party secretaries—Viktor P. Nikonov, Boris N. El'tsin, and Lev N. Zaikov—are 56, 54, and 62 years old, respectively, and apparently share Gorbachev's views. Gorbachev has voluntarily eschewed the position of President, held by all party leaders since 1977, in favor of more active involvement in central political decisions.⁷ In personnel changes he has demonstrated a preference for the group from which he rose to power, the provincial secretaries of the party—a sector of the elite that some Western Sovietologists had thought to be in political decline. Of the major beneficiaries of the personnel changes, almost all have extensive experience as re-

⁶They are Geidar A. Aliev, Mikhail S. Solomentsev, and Vitali I. Vorotnikov.

⁷The head of state's position surely was Gorbachev's for the making, but, he stated to the Supreme Soviet in nominating Gromyko, he believed that under current political circumstances the General Secretary of the party should "concentrate to the maximum degree on the organization of the work of the central organs of the party" and of lower organs. *Pravda*, July 3, 1985, p. 1.

⁸Ligachev, Shevardnadze, El'tsin, and Zaikov's most recent administrative positions were at the regional level. Nikonov was a regional party leader until 1979 and so was Chebrikov until his transfer to the KGB in 1967.

⁹*Pravda*, April 24, 1985, p. 2.

¹⁰Only 4 of the 17 new regional first secretaries had their most recent administrative experience in the same region, and 4 were brought in from other regions. The majority were imported from Moscow—8 from the Central Committee apparatus and 1 from the Council of Ministers. Of them, 5 are known to have worked in the region in question at some earlier date.

gional party bosses, and only one, Ryzhkov, a technocrat who once managed the largest industrial enterprise in the country, has none at all.⁸

The flux at the peak of the political pyramid is apt to continue. Prime Minister Nikolai A. Tikhonov, a crony of Brezhnev's who turned 80 in May, 1985, may be retired before the February, 1986, party congress. His most likely replacement is one of two men moved into the limelight by Andropov: Geidar A. Aliev, 62, Tikhonov's senior deputy, or Vitali I. Vorotnikov, 59, the premier of the Russian Republic. Gorbachev, having declined the position of head of state, may want Tikhonov's job for himself; thus he would become the first Soviet leader since Khrushchev to head the party and government simultaneously. It is also possible that Ryzhkov will be given the post, especially if demanding economic changes are in the making. Several other Politburo members beside Tikhonov seem in shaky positions, notably the perennial local leaders Viktor Grishin (Moscow), Vladimir V. Shcherbitski (the Ukraine), and Dinmukhamed A. Kunaev (Kazakhstan).

Gorbachev has been exceptionally blunt about the need for improved performance and the promotion of younger and more competent officials at the intermediate and lower echelons, a process hobbled by the "respect for cadres" observed during Brezhnev's almost two decades in power. At the April, 1985, plenum of the Central Committee, Gorbachev noted that "certain leaders, occupying the same post for a prolonged time, often stop noticing the new [and] become habituated to their shortcomings." It is necessary, therefore, "to promote more boldly women and young cadres with prospects." The explicit reference to women suggests an attempt to appeal to them as a constituency, although no concrete results have as yet been seen.⁹

Although lower-level personnel changes have not kept up with Gorbachev's rhetoric, the results are beginning to tell. Under the supervision of Gorbachev and Ligachev, 17 of the 157 regional first secretaries of the party were replaced between March 11 and mid-July, 1985. Six were retired and 7 were promoted to weightier positions. It is significant that an unusual number of replacements were officials with recent administrative experience in Moscow—Gorbachev evidently intends to disrupt the local "protectionism" that was encouraged by Brezhnev's habit of appointing regional leaders from within the same locality.¹⁰

One of those promoted is Georgi P. Razumovski, 49, who in June, 1985, was made head of the Central Committee Secretariat's organizational-party work department (the party's central personnel office). Since June, 1983, Razumovski had been first secretary in the Krasnodar region near the Black Sea, where he had continued the work of Vitali Vorotnikov (now a Politburo member); Vorotnikov was sent to Krasnodar the previous year to root out local corruption and mismanagement egregious enough to have received attention before Brezhnev's

death. Razumovski wrote in March, 1985, that since January, 1984, almost one-half of all city and district party and government chiefs in Krasnodar had been replaced and that, in a number of localities "where the greatest number of abuses and other harmful phenomena have been uncovered," local leadership circles "have been renewed almost completely."¹¹ Razumovski's selection for the sensitive position he now holds must mean that Gorbachev and his colleagues believe that "renewal" through hiring and firing is needed throughout the party. The pre-congress party election meetings to take place in the winter of 1985-1986 will provide a convenient occasion to continue the changes.

The renewal process has also had a discernible but less pronounced effect on the Council of Ministers, the organ chaired by Tikhonov that oversees the vast government bureaucracy. By mid-July, Gorbachev's Politburo had replaced 9 of the 85 Moscow-based members of the council, 6 of whom were retired outright, 2 given a better position, and 1 shifted to another ministry.¹² Only one Deputy Prime Minister—Ivan I. Bodiul, the Tikhonov deputy in charge of retail trade and services and closely tied in his earlier career to Chernenko—has been discharged.

Hints of a tougher line toward economic ministers came in a June 11 Gorbachev speech on technological innovation, in which Gorbachev harshly criticized four industrial ministers by name.¹³ Two of these men, Ivan P. Kazanets, the minister for iron and steel production, and Aleksei I. Iashin, the head of the construction materials industry, were dismissed in July, as was Nikolai N. Tarasov, the chief administrator in light industry, an organization that many have criticized over the years.

Aside from rotating personnel and imposing greater discipline on the Soviet political class, what will Gorbachev do about the serious difficulties facing his country?

At times Gorbachev's statements on the Soviet economy have sounded like those of a serious reformer determined not to repeat the half-hearted measures of the recent past. In his June 11 address, he argued that Soviet economic ills were evident in the early 1970's—many other Soviet spokesmen date the troubles from the late 1970's—and he attributed them to the fact that "we did not display persistence in the reorientation of our structural policy, of our forms and methods of management, of the very psychology of economic activity." Life itself, he continued, "demands a profound restructuring of planning and management, of our entire economic mechanism."

When it comes to the actual policies that will bring

¹¹G. Razumovski, "Reshaiushchee zveno partiinogo rukovodstva," *Kommunist*, no. 4 (March, 1985), pp. 28-29.

¹²It is not entirely clear that Gromyko improved his position. He has become titular head of state but he has lost a position with more day-to-day power.

¹³*Pravda*, June 12, 1985, p. 1.

¹⁴*Ibid.*, June 27, 1985, p. 2.

about the "profound restructuring" required, Gorbachev has not yet tipped his hand. Some of his pronouncement sound like those of a conventional party propagandist exhorting workers to fulfill the annual plan. At times he has scolded subordinates for not taking the initiative themselves: "It would be intolerable to go slowly in the expectation of some kind of new instructions or order from above. It is necessary to take action today to fuse into a single stream the efforts of all links of our economy."¹⁴ Such statements have surely bred confusion among officials and the rank and file.

The concrete economic and socioeconomic initiatives undertaken under Gorbachev have either continued or updated measures begun under Yuri Andropov. The weeding out of corrupt managers and lazy workers continues, supplemented by new legislation against drunkenness including a raise in the legal drinking age to 21 from 18 and curbs on the sale of vodka and wine. More private gardening is allowed. There has been some movement toward fulfilling the promise to stratify cash earnings and other rewards on the basis of individual and team performance, a policy aimed largely at Soviet professional and managerial personnel.

Changes also seem to be under way in investment policy, where Gorbachev says scarce funds must be concentrated in "key sectors." Gorbachev announced in June that the Politburo had rejected the State Planning Committee's draft of the twelfth five year plan, covering the years 1986-1990, on the grounds that it dissipates resources and rewarded wasteful ministries. He said priority must be given to the machine-building sector and to technologically advanced support systems for that sector, like the computer and information-processing industries. The apparent losers in this redistribution process will be the oil and natural gas industries and Soviet agriculture, the big spenders in recent five year plans. Gorbachev has also demanded an increase in the export of Soviet machinery and equipment, conceding that many exports have not been competitive with foreign products. He has also called for more effective use of imported goods to spur productivity advances.

Gorbachev has been equivocal about the decentralization of decision-making in industry along Hungarian or Chinese lines and he has hazarded few innovations of his own. Like Andropov, he has advocated greater enterprise autonomy and fuller use of price and profit levers, leaving central planners to concentrate on "strategic tasks." This so-called large-scale experiment with streamlining planning and management in specific industries, launched under Andropov's urging in January, 1984, has been extended to other industries and has received Gorbachev's approval.

(Continued on page 347)

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The Soviet Union "does not face an imminent economic crisis that threatens the country's political and social stability. . . . The economy may be fragile, but production is not about to plummet. . . . [However,] if the Soviet economy is to be modernized to compete in a world of rapid technological change, it needs both a radical reform of the system and a major restructuring of its capital stock. It desperately needs flexibility, economic decentralization, and a smaller bureaucracy."

The Soviet Economy

BY GERTRUDE E. SCHROEDER

Professor of Economics, University of Virginia

THE marked slowdown in the Soviet economy and the massive imports of grain from Western countries in the past few years have led many people in the United States to believe that the Soviet Union is experiencing a profound systemic crisis. In a press conference in early 1982, President Ronald Reagan declared that the Soviet Union was in a "desperate situation" economically, and later in the year an administration spokesman referred to the Soviet Union as an economic "basket case." The following year a well-known specialist in the Soviet economy published a book entitled *The USSR in Crisis: The Failure of an Economic System*.¹ The debate over "crisis or not" continued in 1984,² and with the election of a new General Secretary of the Communist Party—Mikhail Gorbachev—in March, 1985, the press rhetoric has heated up. One writer puts it thus: "The economic crisis is compounded by a social crisis manifested in a catastrophic decline of the work ethic and of discipline among Soviet workers and managers";³ he claims that these crises are accompanied by crises in politics and ideology. Another writer declares the Soviet economy to be in "gridlock."⁴

During the 1950's and 1960's, the Soviet economy performed well. The growth of the gross national product (GNP) averaged better than 5 percent annually; industrial production rose over 7 percent annually; and agri-

cultural output grew at somewhat over 3 percent annually. In those decades the Soviet Union was able to maintain a high rate of investment, accomplish a large military buildup, and rapidly increase living standards. Signs of trouble appeared in the first half of the 1970's, when GNP grew at 3.7 percent annually (see table 1).⁵ This falloff in growth was largely the result of an absolute decline in agricultural production, with harvest failures occurring in 1972 and 1975. A further marked deterioration in growth set in during 1976–1980, the period of the tenth five year plan, and slow growth has continued in 1981–1984.

Since 1976, GNP growth has averaged about 2.5 percent annually, industrial growth about 3 percent and agricultural growth about 1 percent. In these years investment has grown about 4 percent annually, but per capita consumption has risen only a bit over 2 percent annually. The slide in growth was particularly marked after 1978, when six poor grain harvests in a row took a toll on agricultural output and on statistics—the Soviet Union stopped publishing data on production of grain after 1980.

What went wrong? For the economy as a whole and each of its major sectors, the pronounced falloff in growth after 1975 was associated with a moderate slowdown in the growth of labor and capital and an absolute decline in their productivity. The labor force increased more slowly because of a slower increase in the working age population and the inability to raise labor force participation rates—already at a near-maximum and the highest in the world. Capital stock increased more slowly because of the reduced growth of investment. But the principal culprit was the collapse of productivity. In agriculture, the causes seemed to lie to some extent in a run of poor weather, but that sector was also hurt by shortcomings in industry and transportation.

Although Soviet industrial production had slowed in each successive five year plan since 1950, the sharp drop in growth rates that occurred after 1975 was unprecedented and unexpected.⁶ Industrial growth fell from nearly 6 percent in 1971–1975 to about 3 percent in 1976–1982. The breakpoint first occurred in 1976, with a further marked drop in 1979. The downturn affected all 10 major

¹Marshall I. Goldman, *The USSR in Crisis: The Failure of an Economic System* (New York: W. W. Norton and Company, 1983).

²For example, in an exchange of views among Frank Durgin, Kenneth Gray and Marshall Goldman in *ACES Bulletin*, vol. 1, no. 2–3 (Summer–Fall, 1984), pp. 99–118, and no. 4 (Winter, 1984), pp. 55–72.

³Seweryn Bialer, *The Washington Post*, April 21, 1985.

⁴Daniel Seligman, *Fortune*, April 15, 1985, p. 142.

⁵Unless otherwise indicated, all growth rates cited in this paper are Western measurements of Soviet growth based on concepts and methodologies comparable to those used in the West. Official Soviet statistics are widely believed to overstate economic growth substantially. For a thorough assessment of these matters, see Vladimir G. Treml and John P. Hardt, eds., *Soviet Economic Statistics* (Durham, NC: Duke University Press, 1972).

⁶This discussion of industrial growth draws on the author's paper, "The Slowdown in Soviet Industry, 1976–1982," *Soviet Economy*, vol. 1, no.1 (1985), pp. 42–74.

branches of the economy, but was most critical in ferrous metals, fuels and construction materials. Although both employment and the capital stock rose steadily, albeit somewhat more slowly, throughout this period, their productivity declined every year in industry as a whole and in almost all branches. Again, fuels and the metallurgical branches were hardest hit. Consumer goods industries also performed poorly, in part because of shortages of agricultural raw materials.

Although the industrial slowdown can be attributed to many factors,⁷ its timing and severity stem largely from two related causes: 1) the economy's unfavorable response to a decision to cut growth targets and the rate of investment sharply and 2) widespread shortages of raw materials and energy, along with transportation bottlenecks, which were the legacy of past mistakes in investment allocations. The cutback in growth targets, launched with vigor in 1976, was part of a radical new growth strategy designed to achieve a breakthrough in solving the economy's chronic problems of inefficiency in the use of resources and the production of poor quality products. The idea was to give the economy a breathing spell, so that managers could concentrate on the qualitative aspects of performance rather than on the traditional quantitative aspects, and could prepare for the inevitable labor crunch in the 1980's.

But the new strategy failed badly. The cutback in investment growth led to a scramble for available resources and to the starting up of many projects, causing a large increase in the backlog of unfinished construction—from 75 percent of total investment in 1975 to 87 percent in 1980. Many plans to reconstruct and reequip existing plants proved ineffective and disrupted production. Widespread shortages of construction materials and labor were evident. The economic situation worsened with a decision in late 1977 to launch a crash program to accelerate the development of energy resources in West Siberia. It took longer than ever to bring new facilities on stream, partly because they could not be provided with manpower and raw materials. This malaise in the investment process,⁸ which varied in severity among the branches of industry, contributed to growing imbalances and to a decrease in the utilization rate of existing capacities, as well as a marked drop in the addition of new capacities.

Shortages of a variety of critical industrial raw materials seriously hampered the production of intermediate and finished goods, like machinery, and increased in

intensity as one shortage led to another. Particularly serious were shortfalls in the production of coal and steel. Coal production grew scarcely at all, and coal quality deteriorated as better grades were used up. The lack of adequate coal supplies hurt the production of steel, coke, chemicals and cement. Insufficient coal and its poor quality created problems for electric power stations and resulted in many power outages, brownouts and voltage irregularities; this situation had a particularly adverse impact on continuous process operations in steel and chemicals plants. The production of steel and rolled products was only a few million tons higher in 1982 than in 1975, causing machinery producers to complain of a "shortage of metals." In addition, the quality of steel products improved little, adding to the difficulties faced by machinery plants in trying to modernize their output.

The snail's pace growth of steel production stemmed not only from insufficient iron ore and coking coal, but also from increased difficulties in bringing new capacities on stream. The severe problems with extractive raw materials and steel that came to a head during this period resulted from investment decisions made over many years. Planners had skimmed on the development of raw materials, preferring to invest heavily in building processing facilities. They also failed to allow for the depletion and rapidly rising costs of extracting raw materials and for the steady deterioration in their quality, the latter requiring more ore-enrichment and coal-washing facilities.

Industrial performance was further impaired by burgeoning transport problems, notably the deteriorating performance of the railroads that carry the vast bulk of industrial freight. The Soviet press is replete with stories of machinery and workers idled by pileups of finished goods at producing plants and the failure to deliver raw materials on schedule. The situation reached near-crisis proportions during the severe winters of 1978–1979 and 1981–1982. Again, past investment mistakes are largely to blame for the plight of the railroads. Even though the share in total investment was declining, they had been able to handle ever more freight through rapid increases in traffic density. But by 1975, they had reached the limit of their capacity to carry more freight on existing lines with existing technology. Pressure to increase capacities clogged the system's arteries, rendering it congested, prone and reducing its efficiency. Planners focused on adding track without concomitant improvement in yards and station facilities. The quality of rolling stock was poor and the repair of cars had become a chronic problem. Finally, the volume of freight traffic remained excessive (much cross-hauling of goods), because of the tendency toward self-sufficiency that is characteristic of Soviet enterprises.

THE MODEST UPTURN

Industrial growth picked up in 1983 to about 3 percent by Western measures (4 percent by Soviet measures).

⁷A catalogue of causes is set forth in Herbert S. Levine, "Possible Causes of Deterioration of Soviet Productivity Growth in the Period 1976–80," in United States Congress, Joint Economic Committee, *Soviet Economy in the 1980's: Problems and Prospects*, part 1 (Washington, D.C.: U.S. Government Printing Office, 1982), pp. 153–168.

⁸For a good discussion of these problems see Boris Rumer, "Soviet Investment Policy: Unresolved Problems," *Problems of Communism*, vol. 31, no. 5 (September–October, 1982), pp. 53–68.

Table 1: Soviet Economic Performance, 1966–1984
(Average Annual Rates of Growth)

	1966–1970	1971–1975	1976–1980	1979	1980	1981	1982	1983
GNP, Total Uses	5.3	3.7	2.6	0.2	1.7	2.1	2.6	3.0
Consumption	5.3	3.6	2.7	2.9	3.0	2.1	0.8	2.6
Investment	6.0	5.4	4.0	0.3	3.1	4.0	3.4	4.2
Producing Sectors								
Industry	6.4	5.9	3.2	1.9	2.9	2.4	2.3	3.5
Agriculture	3.9	-0.4	1.2	-0.3	-3.2	0.5	6.1	3.7
Construction	5.8	5.6	1.9	-1.2	2.0	2.1	0.8	3.5
Transportation	6.7	6.5	3.5	2.4	3.8	3.8	0.9	2.7
Services	4.3	3.4	2.8	3.0	3.2	2.5	2.2	2.3

SOURCE: United States Central Intelligence Agency, *Handbook of Economic Statistics, 1984*, pp. 64–65.

ures), and these rates were sustained in 1984. Improvement was also noted in transportation and construction. Agriculture scored gains in 1982 and 1983, but none in 1984. The moderately improved economic performance can be attributed mainly to exceptionally mild winters, which reduced the strain on the railroads and the demand for fuel, and the “Andropov effect.” Immediately after his election as General Secretary in November, 1982, Yuri Andropov took steps to turn the economy around. He fired some key personnel (one being the minister of the railroads) and threatened to penalize others. He launched an energetic campaign to encourage better “discipline” from workers, managers and the administrative bureaucracy. He also endorsed a campaign to engage industrial firms in the repair of damaged freight cars, thus setting them on the rails again. As a result of such actions and good luck with weather, some bottlenecks were relieved and some new capacities were added. Particularly welcome was the upturn in chemicals and in the raw materials sectors, but the growth of energy supplies continued to slow.

Industrial growth may fall in 1985. In the first quarter of 1985, industrial production was reported at 2 percent above that of the first quarter of 1984. But the output of several key products, like oil, steel and cement, dropped significantly. This setback suggests that the industrial and transportation sectors are vulnerable.

Following Konstantin Chernenko's brief tenure, Mikhail Gorbachev became General Secretary of the Communist party in March, 1985. The three old men who were his predecessors left an economy still able to generate slow growth, but one beset with deep-seated problems that threaten further retardation in growth and a widening of the technological gap with the West. The litany of economic problems is awesome: stagnant productivity; rising costs and declining growth of energy supplies; imbalances between capacities to produce finished goods and corresponding raw materials capacities and between

⁹Ed A. Hewett, *Energy, Economics, and Foreign Policy in the Soviet Union* (Washington D.C.: The Brookings Institution, 1984), p. 1.

¹⁰These energy/GNP ratios were calculated from data in the United States Central Intelligence Agency, *Handbook of Economic Statistics* (1984), pp. 22–23 and 127.

productive capacities of all kinds and the infrastructure needed to support them; a capital stock that is woefully backward technologically; a high-cost agriculture that is a terrible drain on scarce labor, capital and hard currency; a consumer sector in massive disequilibrium and unable to generate the material incentives needed to spur productivity; and, perhaps most serious of all, an “economic mechanism” that is totally unsuited to the requirements of a modern industrialized society.

ENERGY

Despite having very large reserves of oil, gas, and coal, the Soviet Union has a serious energy problem that stems from slowing growth and rapidly rising costs of extraction; from excessive use of energy in the economy; and from the urgent need to export large amounts of energy for political and economic reasons. During 1981–1984, production of fuels increased at less than 1.5 percent annually, compared with 3 percent in 1976–1980 and 5 percent in 1971–1975. Oil production essentially leveled off after 1980 and dropped by 4 percent in 1984. In terms of energy content, coal production has stagnated since 1975. Natural gas production is also growing more slowly—at an annual rate of 7 percent during 1981–1984 against 8.5 percent in 1976–1980.

These trends are likely to continue at least for the rest of the decade. Since over two-thirds of Soviet energy is produced east of the Urals and some 75 percent of total energy is consumed west of the Urals, investment costs to deliver a unit of energy to consumers have been increasing rapidly. Ed Hewett estimates that the investment cost of extracting an increment of energy (one barrel per day of oil equivalent energy) in 1980 was triple the average cost in 1966–1970 and that the cost of transporting fuel has also risen rapidly.⁹ Partly to cope with these costs and to stave off a decline in oil production, the Soviet government in 1977 decided on a major reallocation of investment to the energy sector, notably to oil; thus, oil, which had claimed 9.6 percent of industrial investment in 1975, took 17 percent in 1983. The Soviet Union also accelerated investment in pipelines for both oil and gas.

Energy consumption in the U.S.S.R. is excessive by world standards.¹⁰ In 1982, total energy consumption per

dollar of GNP in the Soviet Union exceeded that of the United States by one-fifth, the European Economic Community by nearly two-fifths, and Italy (a country near the U.S.S.R. in per capital GNP), by nearly two-thirds. Moreover, the energy use per unit of GNP has increased in the Soviet Union since 1970, whereas it has fallen dramatically in the West. The lavish consumption of energy in the U.S.S.R. is rooted in the energy-wasteful technology embedded in the capital stock and in the system-related weak incentives for conservation by users.

Along with crash programs to boost supplies, the Soviet government has pushed many measures to conserve energy. Ambitious plans have been announced to introduce energy-efficient technologies in heavy energy-using branches. Targets for saving fuels have been introduced into enterprise plans and incentive arrangements, and in 1982 the price of oil was more than doubled, along with steep price increases for other fuels and electricity. Thus far, the payoff on these measures has not been great. In the meantime, a debate rages between advocates of increased large investment to boost supplies and those who urge large allocations to reduce demand, the latter group asserting that the cost of saving a unit of energy is two or three times less than producing it. Gorbachev will soon have to choose between these alternatives or opt to push both strategies. In any event, the ability of the system to implement major conservation programs speedily is open to grave doubt.

The Soviet Union now exports some 15 percent of its energy and about one-fourth of its oil. Exports of oil are divided about equally between sales to Communist countries and sales to the West. Encouraged by subsidized prices until recently, members of the Council for Mutual Economic Assistance (CMEA) have become heavily dependent on the Soviet Union for oil, which they pay for with other goods on barter terms. Energy is sold to the West for hard currency, and in 1982 energy-related products accounted for about two-thirds of total hard currency earnings. For political reasons, the Soviet Union needs to maintain energy deliveries to other Communist countries to support their fragile economies and to stave off possible

social disorder there. Given the near unsalability of its manufactured goods in Western markets, the Soviet Union must also try to maintain energy-related exports to the West, if it is to pay for Western technology to modernize its industrial plant and for the grain it needs to compensate for agricultural shortfalls. Given its domestic problems with coal and oil production and the snail's pace progress in energy conservation, the government will find energy-management difficult for the rest of the decade.

TECHNOLOGICAL BACKWARDNESS

Soviet technology lags well behind technology in the West and the gap has not narrowed over the past 15–20 years.¹¹ In 1980, continuously cast steel accounted for about one-tenth of Soviet production, compared with over half in Japan and West Europe; the yield in Soviet steelmaking plants was only 69 percent of finished steel per ton of crude and had been static for years, whereas the yield in the United States was 74 percent and in Japan, 87 percent.¹² Soviet computers lag some 10 years behind those in the United States in technical characteristics and performance, and software is primitive by comparison.¹³ Although conventional machine tools produced in huge numbers in the U.S.S.R. are similar in technology to those in the West, they are inferior in quality, reliability and variety, and advanced machine tools (numerically controlled tools) are obsolete technologically by United States standards and inferior in quality as well.¹⁴ Soviet energy technologies lag well behind Western achievements.¹⁵ This list could be greatly extended.

The general conclusion of these case studies is corroborated by relative productivity measurements for the economy as a whole. Thus, GNP per worker in the U.S.S.R. in 1982 was less than two-fifths of GNP per worker in the United States, about three-fifths of Japan's, half of West Germany's and a little under half of Italy's. These large gaps have been increasing with respect to Japan and West Europe in the postwar period and have been narrowing very slowly compared to the United States. Most Western industrialized countries have achieved half or more than half of their economic growth from technological progress (increases in factor productivity), whereas the Soviet Union has achieved only about one-fifth of its growth from that source—in the economy as a whole as well as in the long-favored industrial sector.

The Soviet experience has shown that centrally planned socialism has a large comparative disadvantage in generating technological advance. This is so, despite the fact that the U.S.S.R. invests a larger share of its GNP

(Continued on page 340)

¹¹Ronald Amann, Julian M. Cooper and R. W. Davies, *The Technological Level of Soviet Industry* (New Haven: Yale University Press, 1977), and Ronald Amann and Julian Cooper, *Industrial Innovation in the Soviet Union* (New Haven: Yale University Press, 1982).

¹²United States Central Intelligence Agency, "Sluggish Soviet Steel Industry Holds Down Economic Growth," in *Soviet Economy in the 1980's*, p. 201.

¹³Kenneth Tasky, "Soviet Technology Gap and Dependence on the West: The Case of Computers," in United States Congress, Joint Economic Committee, *Soviet Economy in a Time of Change*, volume 1 (Washington, D.C.: U.S. Government Printing Office, 1979), p. 512.

¹⁴James Grant, "Soviet Machine Tools: Lagging Technology and Rising Imports," in *ibid.*, p. 561.

¹⁵Robert W. Campbell, "Technological Levels in the Soviet Energy Sector," in NATO, Economic Directorate, *East-West Technological Cooperation* (Brussels: NATO, 1976), pp. 241–265.

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"American enthusiasm for SDI is sure to strengthen the existing Soviet SDI-like program, which seems to have enjoyed good funding and substantial facilities"

Ballistic Missile Defense in the Soviet Union

BY SAYRE STEVENS

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IN increasing degree, the Soviet Union has used its military power to project an image of superpower status. The strategic arms limitation talks (SALT I), with their embodied recognition of Soviet strategic parity with the United States, made this approach credible. The Soviet Union takes such an approach today of necessity. It cannot claim superpower achievements in economic performance, in boosting the quality of life, or in less utilitarian social accomplishments. Thus, the Soviet Union's maintenance and continual improvement of an image based on military might is particularly significant.

In many regards, Soviet leaders find that the projection of an image of conventional military power is most important: the impact on West Europe is apt to have the most immediate effect; the dangers of a North Atlantic Treaty Organization (NATO)-Warsaw Pact confrontation are of closest concern; and Soviet tactical forces and equipment are being tested under worldwide scrutiny.

Indeed, a very ambitious program of Soviet force expansion, equipment modernization, and regeneration of military tactics and concepts has been under way. Newly introduced equipment includes new tanks and armored vehicles, artillery, air defense systems, attack and air superiority helicopters, shorter-range ballistic missiles, and tactical aircraft. As a result of these efforts, the Soviet Union is able to present to the world a modern, powerful, mobile, nonnuclear offensive threat to Europe and portions of Asia, and it is able to do so despite difficulties in Afghanistan and with the poor performance of Soviet equipment in the Middle East.

In the strategic arena, Soviet leaders have been remarkably successful in improving their quick reaction counterforce capabilities; a new fourth generation intercontinental ballistic missile (ICBM) force has put a substantial part, if not all, of United States ICBM's at risk. It is instructive that in taking this step, the Soviet Union has

taken others intended to maintain the survivability of Soviet forces. These include silo hardening and the development and testing of new mobile ICBM's. Submarine-launched ballistic missiles have been improved and a growing fleet of new ballistic missile submarines is being built. A new strategic bomber is under development. New ships have been added to the fleet, including new classes of submarines and aircraft carriers.¹ One must conclude that the Soviet Union has been successful over the last decade and a half in using defensive might as a basis for enhancing international stature. Now Soviet leaders are faced with a new challenge to the foundation for this projection of superpower status.

President Ronald Reagan's announcement of the Strategic Defense Initiative (SDI) and the high profile given to it threaten the Soviet Union with a serious change in the structure of strategic forces as it has existed over the past decade or so. The challenge lies in the field of strategic defensive weapons systems and in their ability to counter a dynamic and growing strategic ballistic missile threat. It is a field in which the Soviets have had extensive experience. In many regards they are far better geared to deal with new strategic defense initiatives than the United States, which, until now, has generally eschewed such defenses, or at least has found itself incapable of acquiring and retaining them.

It is notable that in both the Soviet Union and the United States, attitudes toward the Strategic Defense Initiative as announced by the President are characterized by some remarkable contradictions with past behavior, expressed future concerns and hopes, and the stated rationales that have been associated with the treatment of strategic defenses. In general, the Soviet Union has been enthusiastic about defenses and has been stalwart in developing and maintaining them in circumstances where the United States has found it questionable to follow the same course.

Soviet concerns with the acquisition of defensive weapon systems emerged from the realities of World War II and the terrible costs of inadequate preparation and readiness for war.² The devastating German air raids on Moscow and Leningrad were an important part of that experience.

Early work focused on the development of air defenses and its results were soon seen with the remarkable deployment of jet interceptor aircraft and anti-aircraft artillery.³ These were systems designed to deal with the

¹United States Department of Defense, *Soviet Military Power* (Washington, D.C., April, 1985), pp. 25-60 and 91-112.

²This discussion of past Soviet strategic weapons developments is drawn in large part from my chapter on "The Soviet BMD Program," in Ashton B. Carter and David N. Schwartz, eds., *Ballistic Missile Defense* (Washington, D.C.: The Brookings Institution, 1984), pp. 182-220.

³Johan J. Holst, "Missile Defense: The Soviet Union and the Arms Race," in Johan J. Holst and William Schneider Jr., eds., *Why ABM? Policy Issues in the Missile Defense Controversy* (Elmsford, N.Y.: Pergamon, 1969), pp. 146-147.

mass raids that characterized World War II. While other countries were rapidly demobilizing and reducing their forces in this period, the Soviet Union developed and deployed unmatched air defenses.

A significant event in this period was the formation of the National Defense Forces or the PVO Strany (*Protivo-vozdushnaya Oborana Strany*), which assumed responsibility for the development, acquisition and operation of strategic defensive weapon systems. Over the years, the PVO has grown in power and in relative position within this establishment,⁴ and is now responsible for all aspects of air, antisatellite and ballistic missile defense. In the competition for budgets and for programmatic support from party and government leaders, the PVO has been remarkably successful.⁵

Surface-to-air missile systems were under development and becoming available for deployment in the early 1950's. The first of these was a system deployed around Moscow, designated the SA-1, which was intended to deal with very large bombing raids. This system owed a good deal to contributions by the German scientists in the Soviet Union but was nevertheless a remarkable development. It was the first widely deployed SAM system in the world.

The SA-1 was followed by the SA-2 system, which was rapidly deployed throughout the U.S.S.R. and in client states like Vietnam in the 1960's and 1970's. As the United States offensive aerodynamic threat changed, Soviet defenses kept pace.

A readiness to deploy rudimentary systems that provide the basis for a weapon system that will ultimately have the capabilities sought is characteristic of the Soviet weapons acquisition process. This approach requires that continual improvements be made through system modifications, and that follow-on systems be planned and programmed. But it has the advantage that even still flawed systems provide the Soviet Union with a force-in-being that is able partially to fulfill some important missions. The Soviet Union seems to find that worthwhile; the United States does not.

Photography obtained by the United States in April, 1962, showed an immense Soviet undertaking involving the development of early ABM systems as well as advanced air defense systems that would emerge in the decades ahead. Particularly notable was the Hen House radar, whose large size prevented identification as a radar for some time. It was to provide the basis for the peripheral Soviet radar network that would provide early warning of a ballistic missile attack and, as further developed in subsequent years, a possible infrastructure on which a

⁴Ibid., p. 147, and Harriet Fast Scott and William F. Scott, *The Armed Forces of the USSR* (Boulder, Colo.: Westview Press, 1979), pp. 147-153.

⁵For comparisons of strategic defense expenditures with those of other mission areas, see United States Central Intelligence Agency, *A Dollar Cost Comparison of Soviet and U.S. Defense Activities, 1966-1976*, SR77-10001U (Washington, D.C.: CIA, 1977).

nationwide ABM system might be developed. Other experimental radars were also visible. The size and scope of the effort at Sary Shagan made it strikingly clear that the Soviet Union had not only made a substantial investment in solving the antiballistic missile problem, but had made some progress. Sary Shagan proved to be the development and testing center for the PVO, supporting work on the ABM, strategic air defenses and, probably, antisatellite systems.

Among the ABM activities identified at Sary Shagan were the beginnings of at least two distinct systems. One proved to be the Moscow ABM system prototype; the second was a system to be deployed around Leningrad in the early 1960's.

In 1961, work was begun on the deployment of a defensive system around Leningrad. This system was based upon the Griffon missile displayed subsequently in parades in Moscow. Whether or not the system had true ballistic missile defense (BMD) capabilities remains uncertain, although Soviet statements indicated that its capabilities included some potential for the destruction of incoming missiles of one sort or another. In any event, this system had a short life, and within several years it was removed from around Leningrad.

A year or so after the start of Griffon deployment, work began on the construction of ABM defenses around Moscow. This system employed the Galosh missile, much larger and more formidable than the Griffon, and substantially larger and more powerful radars. Work was begun on six defensive complexes located about 50 miles from the center of Moscow. Only four of these were ultimately completed. This system continues to be operational today and is now undergoing what appear to be significant improvements in its capabilities.

In the early 1960's, one notable feature was evident in Soviet activities: the presence of two differing approaches to the development of an antiballistic missile capability. On the one hand, the Leningrad or Griffon system appeared to be the result of trying to improve air defense surface-to-air missile systems to the point of achieving some capabilities against ballistic missile targets. On the other hand, the Moscow ABM defense system reflected an attempt to deal with the more difficult problem associated with intercepting and neutralizing ballistic missile reentry vehicles.

Thus, the Moscow system employed large radars that could track very small targets at great ranges and the Galosh, a large, long-range interceptor missile guided by large dish radars, which allowed the Galosh to intercept targets at long ranges from the Moscow defenses. Moreover, battle management was provided by huge phased array radars and associated data processing centers. This system had some significant shortcomings but it provided the capacity for dealing with at least a small number of attacking ballistic missiles. Its size and apparent cost, however, made its widespread deployment a difficult undertaking. Nevertheless, there were early indication

that the Soviets planned to deploy an ABM system beyond the Moscow area.

The Soviet Union appeared to drag its feet in 1967 when the United States proposed arms control discussions limited to ABM systems alone. There are differing interpretations of Soviet reactions to these proposals,⁶ but a significant change seems to have occurred by the beginning of the November, 1969, SALT talks in Helsinki. At that first SALT session, the Soviet Union indicated a readiness to discuss the limitations of ABM systems. Indeed, at that session Soviet negotiators took the initiative to note the possibility of a complete ban on ABM systems. The causes that may have led the Soviets to make this apparent shift toward constraining antiballistic missile defenses must be considered because they may well relate to Soviet attitudes toward competing with the United States in the Strategic Defense Initiative.

Not all observers agree on the causes.⁷ With the ABM Treaty, the Soviets accepted constraints that effectively limited the opportunity to carry an ongoing BMD program beyond deployment at Moscow. It has been argued by most critics that the Soviets were responding to expediency in limiting the United States ability to develop and deploy the substantially more advanced Safeguard ballistic missile system. Others, however, contend that the Soviets, in the course of their own ABM debate, came to accept the strategic concept of mutual assured retaliation and the destabilizing effects of widespread ABM deployment. This author is inclined toward the former view.

The United States ballistic missile defenses then under development embodied substantially more sophisticated and powerful technology than the Moscow system. Moreover, there were clear indications that the United States had plans for a substantial deployment of that system in the United States. For its part, the Soviet Union was finding the Moscow system to be limited in its ability to deal with large-scale attacks, and changes were being made in United States forces—in particular, the introduction of multiple, independently targeted reentry vehicles (MIRV's)—that would have made it possible to overwhelm the Moscow defenses. Moreover, the approach taken in the development of the Moscow defenses, that is, dealing with ballistic missile defense through the use of large, very powerful radars and very capable, long-range missile interceptors, made it difficult to deploy that system widely throughout the Soviet Union.

⁶See Raymond L. Garthoff, "BMD and East-West Relations," in *Ballistic Missile Defense* for a fuller and somewhat different view of Soviet attitudes toward ABM controls in this period.

⁷Thomas W. Wolfe, *The SALT Experience: Its Impact on U.S. and Soviet Strategic Policy and Decisionmaking*, RO1686-PR (Santa Monica, Calif.: Rand Corp., 1975), pp. 116–121, discusses these differing explanations of the causes for change in Soviet views toward BMD limitation.

⁸For a discussion of "SAM upgrade" anguish see "The Soviet BMD Program," pp. 204–208.

In sum, the technology the Soviet Union had in hand did not appear able to compete with a dedicated United States ABM program. It was also disturbing that significant United States defenses would threaten some of the cornerstones of Soviet strategic doctrine. In particular, they would blunt the effectiveness of preemptive strikes intended to disorganize the ability of the adversary to conduct the vital initial phases of war and would substantially reduce the effectiveness of the counterforce element in Soviet strategic defensive policies.

The ABM Treaty concluded as part of SALT I in 1972 constitutes a significant watershed that separates early Soviet developments in strategic weapons from more recent developments. Air defenses continued to develop, largely unaffected by the treaty, although concerns about dual-use SAM systems (SAM systems capable of intercepting both aircraft and ballistic missiles of various types), became a substantial concern in the United States and may well have caught the interest of the Soviets themselves in their development programs.⁸

Soviet strategic goals were largely unchanged by this watershed and, with the exception of actual ABM deployment beyond treaty limits, there are few signs of a Soviet change of heart about strategic defenses. Growing attention has been given to preserving the survivability of expanded and improved offensive forces. Strategic command and control elements and reserve military forces have been made more durable in the event of nuclear war through such passive defensive measures as hardening, dispersal and mobility. Bunkers have been built in many locations for the political and military leadership as part of a civil defense program that has generally strengthened capabilities for post-attack reconstitution by protecting vital industrial cadres and other selected segments of the population.

Active defenses have not been ignored. The SA-10 system is now being widely deployed to provide strategic air defense against low-altitude bombers and cruise missiles. New interceptor aircraft with more sophisticated look-down, shoot-down capabilities are being added to the force. The extensive air defense radar infrastructure has been maintained and augmented with new and improved radars. A nonnuclear, orbital antisatellite system has been repeatedly refined and tested in attacks against low-altitude satellite targets under various circumstances. It is now presumably operational.

The search for effective ABM defenses has continued, despite constraints embodied in the ABM Treaty that limit future deployment possibilities. Such activities are neither surprising nor improper. Both the Soviet Union and the United States made it clear during the treaty negotiations that maintaining such activities was a concomitant safeguard.

Soviet pursuit of these activities has been both more aggressive and less stultified by concerns about possible future conflict with treaty provisions than has the United States effort. The Soviet program seems guided by an

understanding that in so dynamic an area as strategic force development, an agreement reached about appropriate behavior at one time cannot be expected to remain acceptable in changing circumstances for so long into the future as to eliminate the need for research and development.

Several significant products emerged from this effort by the late 1970's. The most important of these is the ABM-X-3 system, which combines a new, transportable, phased-array radar and a high-acceleration interceptor missile much like the United States Sprint. The system appears to reflect an air defense heritage more than an association with the Moscow ABM defenses. As a result, it appears to be better suited for widespread deployment than the Moscow system. The high acceleration interceptor allows the Soviets for the first time to employ atmospheric sorting to discriminate between real reentry vehicles and penetration aids. An improved version of the Galosh missile has appeared that might also be used as part of the ABM-X-3 system.

Widespread deployment of the ABM-X-3 would seem to require new long-range search and acquisition radars. Those associated with the Moscow system are huge and are not really prime candidates for replication. The peripheral radars might fulfill this role, although the old Hen House radars probably could not provide tracking data accurate enough to support direct handover to an ABM-X-3 site. But the peripheral radar network has been improved and augmented with new, large phased arrays capable of substantially improved tracking. The major shortcoming of this network remains, however: the vulnerability of the large VHF radars to nuclear effects, including destruction and blackout. The disturbing aspect of the ABM-X-3 development is the option it gives the Soviet Union to deploy limited ABM defenses widely and rapidly at a time of its choosing. The United States has no comparable option and is at least five years away from having one.

The Moscow system is also being upgraded. Subsequent to the conclusion of the ABM Treaty, Moscow defenses were limited to 64 deployed Galosh interceptors despite treaty provisions that would allow as many as 100. The Try Add dish radars with their limited target-handling capabilities were retained despite Soviet insistence on treaty provisions designed to allow for their replacement. In 1980, half the Galosh launchers were removed, and the deployment of new elements was begun. The most notable of the new elements was the Pushkino radar, a very large pyramidal structure some 500 feet on a side and 120 feet high. Each of the four faces contains a circular phased array. Presumably the Pushkino radar will perform the engagement radar function for a major part of the Moscow system.

It seems likely that the interceptor complement of the Moscow system will now be increased to the treaty limit. The types of missiles to be added are not yet known but are likely to be the ABM-X-3 high-acceleration intercep-

tor and the improved Galosh. Defense of the large battalions management and Pushkino radars appears to be intended and is necessary in view of their vulnerability. One important effect of the enhanced infrastructure is that the substantial expansion of the system could occur rapidly. Such expansion would be an important part of any widespread ABM deployment.

The dual use of SAM's to provide both air defense and defense against ballistic missiles was a major worry in ABM Treaty negotiations because of the possibility that the extensive deployment of Soviet SAM's could undermine ABM limits. As the United States aerodynamic threat has become more difficult to counter, Soviet air defenses have been made more capable. Many United States improvements have thus generated Soviet air defense capabilities that are in part relevant to a capacity to intercept ballistic missiles. As a result, newer Soviet SAM's are increasingly likely to have some ABM capability. The density and extent of Soviet SAM deployment in conjunction with improvements to the peripheral radar network necessary to support the use of SAM's against ballistic missiles constitutes an additional worry for the United States.

Most disturbing of all is the appearance of the SA-10 system designed to counter high-performance aircraft and to have a capability against tactical ballistic missiles. Such a system must include in its design many of the features apt to be missing and requiring upgrading in SAM systems, such as very short reaction times and automated launch commitment processes. This development generates a new level of concern about the ABM capabilities of systems that are not constrained by the ABM treaty but can be given, or already have, some ability to intercept strategic ballistic missiles.

Of particular importance, because of the American SDI, is continuing Soviet research, development, and possibly the testing of directed-energy weapons with a view to their future use in ABM applications. Reportedly the Soviet Union has investigated both high-energy laser and particle beams. This work parallels many of the directions recommended for study as part of the SDI. Major Soviet installations seem to be part of the Soviet effort. It is estimated that prototypes for ground-based lasers for ballistic missile defense and space-based anti-satellite lasers will be available by the late 1980's. The testing of components for a widely distributed BM system could begin in the early 1990's, though initial operational deployment is not considered likely in the century. A space-based laser BMD system could perhaps be deployed after 2000. A prototype particle beam system could be produced and be ready for testing by the late 1990's.

(Continued on page 344)

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"Negotiating prospects in 1985 were fraught with uncertainty. President Reagan's accommodating November, 1984, campaign rhetoric . . . brought Moscow to the bargaining table. . . . [The Soviet Union] might have doubts about American motives, but it could not dismiss Washington's professed willingness to address all outstanding issues without impugning its own."

Soviet–American Arms Control: Hope or Hoax?

BY CARL G. JACOBSEN

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IN January, 1985, United States Secretary of State George Shultz met with Soviet Foreign Minister Andrei Gromyko to discuss the reopening of arms control talks between the United States and the Soviet Union.* Talks had ended in 1983 after a Soviet walkout to protest the deployment of United States intermediate-range missiles in West Europe; thereafter, communication between the superpowers was minimal.

Since 1981, each country had reviled the other as fanatical, evil, Nazi-like. Both nations had increased spending on arms, even though scientists estimated that the detonation of a mere two percent of existing arsenals might blanket the world in nuclear winter. The political atmosphere reminded former West German Chancellor Helmut Schmidt of the events leading up to World War I; historian George Kennan was reminded of the rhetoric that, throughout history, has accompanied and characterized the march to war.

The new arms control talks were thus welcome. Both sides felt compelled to appear flexible, reasonable and willing to negotiate. Early negotiating sessions were not encouraging, however, and the celebrations marking the fortieth anniversary of the end of World War II in Europe led each country to charge that the other was cheating on past arms control agreements and sabotaging prospects for a new accord. It is still too early to say whether this represents a return to the trends that have marked the Soviet and American positions on arms control over the last four years or whether the new attempts at arms control will succeed.

In 1981, the incoming administration of President Ronald Reagan projected what is now acknowledged to have been a grossly exaggerated image of Soviet power. Yes, Moscow had acquired a lead in certain crude quan-

titative categories of power, and in some cases the crude might be more effective than the over-sophisticated. Moscow had also acquired some distant air- and sea-power projection capabilities.

But the Defense Department's Office of Technology Assessment confirmed significant United States advantages in most areas of basic technology. And Defense Department statistics showed (and still show) a United States lead in what are probably the five most important categories: total warhead numbers; overall accuracy (far more important than yield); warhead miniaturization technologies (allowing more on smaller missiles); readiness (well over 60 percent of United States strategic submarines are ready at their firing locales at any one time, compared to only 14 percent of Moscow's); and vulnerability (three-fourths of Moscow's strategic arsenal is land-based, and hence theoretically vulnerable, compared to less than 20 percent of the United States arsenal).¹

Some areas of asserted Soviet quantitative advantage were in fact sleight-of-hand projections. The Soviet navy did indeed have more ships, but an aircraft carrier does not equate with a motor transport boat (MTB); in tonnage and in the ability to sustain distant voyages, the United States retained a two-to-one lead. Moscow did have more tanks, but figures that included Soviet reserves while leaving out the reserve tanks of the North Atlantic Treaty Organization's (NATO), and that ignored qualitative factors like the twice higher average firing rate of NATO's tanks were propaganda, and not helpful.

President Reagan had been openly disdainful of arms control when he assumed office. Two decades of arms control had not slowed nuclear escalation or proliferation. The President feared that the process had lulled people into a false sense of security. He was surely at least partly sincere when he described the Soviet Union as an "evil empire." This view of the world as divided between good and evil gave arms control a sinful connotation. United States–Soviet arms control is predicated on a willingness to concede parity. The biblical vision (like that of Karl Marx) calls for unremitting struggle.

*An abbreviated version of this article appeared as "Arms Control: Last Chance or Lost Chance?" in *A Proxy for Trust: Views on the Verification Issue in Arms Control and Disarmament Negotiations* (Ottawa: Carleton University, 1985).

¹For United States government documents and references, see C. G. Jacobsen, *The Nuclear Era* (Cambridge, Mass.: Delgeschlager, Gunn and Hain, 1982), chapter three.

Some elements of the Reagan administration's defense program, like the MX missile, the Trident submarine, the B-1 and stealth bombers and cruise missiles—all initially funded, researched and/or developed by previous administrations—could be seen as typical of the traditional United States drive to maintain an edge. But previous administrations, both Republican and Democratic, recognized that the edge was relative. They conceded the present and probable future reality of the nuclear deterrent, MAD (mutual assured destruction), and hence the need for arms control. The Reagan administration, however, was not resigned to MAD, or to the concomitant thesis that arms control was a vehicle for systems stability. It appeared, instead, to set itself the goal of reestablishing meaningful American superiority.

The administration's embrace of nuclear utilization theories (NUTS) fueled Defense Department procurements aimed at rendering accumulated Soviet weapon stocks "obsolete." The program found political expression in the forward deployment of Pershing 2 ballistic missiles in Europe, just minutes from Soviet targets; the deployment defied a tacit 20-year agreement not to deploy shorter-range missiles near each other's territory. The denial of reciprocal Soviet rights in Cuba underlined the challenge: Moscow must accept disadvantage, or precipitate crisis.²

But the more important military moves lay elsewhere. One was the procurement of supercarriers and hunter killer submarines designed to go for the very jugular of Moscow's defense systems, the Barents Sea and Okhotsk Sea sanctuaries that harbor its submarine-launched ballistic missiles (SLBM's), which are the heart of its deterrence. Complementary United States air and other support facilities in Norway, Iceland and Japan were upgraded and modernized.

The second focus for Washington was space. Laser, high-energy particle beam, antiballistic missile and other technologies integral to multilayered space defense visions received priority funding. The United States population was to be made immune from nuclear horrors.³ But at a time when United States warning systems still spawn five and more false alarms a month and with Soviet systems no better, the Pershing deployment and Moscow's answering move of more missile submarines closer

to United States targets and United States command and control centers caused widespread unease. Many thought that the loss of time, time to double- and triple-check radar blips, was unconscionable.

Supporters of arms control nevertheless found some cause for optimism. They had feared that Moscow might feel forced to adopt a launch-on-warning strategy in response to the minimal flight time of the Pershings, or that in extremis, it might prove defiant enough to move SS-20's to Cuba. But there was no evidence of the first; and the Soviet Union's measured choice of submarines as primary deployment response was one that made the military (if perhaps not the political) point without forcing an immediate confrontation.

The appointment of Paul Nitze as Secretary Shultz's adviser for the January, 1985, meeting with Gromyko also appeared propitious. Nitze was the doyen of the conservative wing of America's traditional arms control establishment and the administration's chief negotiator on theater-nuclear arms in Europe before those talks were broken off. After all, he was co-architect of the "walk in the woods" formula. The formula, vetoed in Washington and in Moscow, called for balancing Soviet Euromissiles by slower American cruise missiles, not ballistic Pershings. Nitze's reemergence suggested increased support for the thesis that Moscow's Pershing phobia would have been accommodated if agreement were to be reached.

Arms control advocates also found solace in the fact that internal United States Navy documents evinced extreme skepticism concerning the Barents/Okhotsk strategy.⁴ Navy Secretary John Lehman, a political appointee, might appear undeterred. But if United States Navy professionals found the task overly daunting, then Moscow might be presumed to feel some confidence—and therefore less jitteriness—about its deterrent.

Finally, a veritable who's who of America's most prominent scientists expressed doubts about the feasibility of leakproof "Star Wars" defense system. To get there from here made the route from the Wright brothers' first plane to the 747 appear short and easy. Remaining technological problems and plausible cost estimates of up to trillion dollars and more appear equally prohibitive. Countermeasures are likely to prove far cheaper, whether they take the form of laser-reflecting foil, nuclear mines "parked" near space defense installations, increases in warhead numbers to offset the degradation potential of the defense system, and/or a mushrooming of supersonic ground-hugging cruise missiles darting under the supposed defense shield. Most important, however, appears nearly inconceivable that either side would tolerate completion of such a system by the other. Surely the United States President would acquiesce in a Soviet space defense system that would grant Moscow immunity against assigning the United States permanently to the ranks of lesser powers. Similarly, no Soviet leader can possibly accept the reverse.⁵

Early 1985 thus represented "a window of oppor-

²The London-based International Institute for Strategic Studies estimated that 270 SS-20's, if accompanied by the phase-out of older Soviet missiles, would not upset the European nuclear balance; new NATO systems would be required only if the tally went above 270. By late 1983, European SS-20's were still below that figure.

³"Space Weapons," *The Bulletin of the Atomic Scientists*, May, 1984.

⁴See the *Washington Post*, May 2, 1982, and *Newsweek*, May 17, 1982.

⁵See "Space Weapons," op. cit., and Hans Bethe et al., "Space-Based Ballistic Missile Defense," *Scientific American*, October, 1984. See also "Soviet Scientific Paper Calls Space Defenses Vulnerable," *The New York Times*, January 8, 1985.

nity." The old approach to arms control was discredited. One alternative, to pursue the holy grail of superiority, the dream of release from nuclear horrors, appeared illusory. Logic decreed that the time had come to seek alternative forms of arms stabilization and arms reduction.⁶

One other interpretation of White House motives commands thought, namely, that the goal was not the perhaps ephemeral aim of absolute military security but, rather, psychological security.⁷

One might infer some support for this view from the nature of the administration's historically unprecedented defense spending increases. Congressional passage was secured by referring to the "Soviet threat." But the actual defense programs funded were not focused on specific areas of real or perceived imbalance, real or perceived threat. Nor were they focused on programs that might lead to United States strategic superiority, like the President's Strategic Defense Initiative ("Star Wars") or the Navy secretary's ambition to strike the Barents and the Okhotsk submarine sanctuary. The defense largess was spread across the board; military bands and entertainment accounts received the same percentage increases as strategic force elements and fighting units.

The "window of vulnerability" may have been a myth, but America's armed forces did suffer problems. Vietnam's legacy, drugs and sometimes poor morale, remained. The Rapid Deployment Force was being built up, but the Army did not have general-issue water canteens large enough to hold the daily water rations required for desert regions. The Navy wanted more ships, but existing ships could not be fully utilized because of a shortage of midlevel technicians and specialists. The Reagan administration's first-term efforts did improve morale, and drug addiction may have decreased. But the canteen problem remains. And improved specialist retention rates owe more to economic uncertainties than to government policy. Ironically, one can argue with some justice that many of the real problems of 1981 have in fact not been addressed; the financial windfall has passed them by.

This may have been due in part to presidential disinterest. In his third year of stewardship as President and Commander-in-Chief, Ronald Reagan's words suggested ignorance of some of the most fundamental facts of the

⁶See Robert Axelrod, *The Evolution of Cooperation* (New York: Basic Books, 1984), and Lewis Thomas, "Scientific Frontiers and National Frontiers: A Look Ahead," *Foreign Affairs*, Spring, 1984.

⁷Nicholas Lemann, "The Peacetime War," *The Atlantic*, October, 1984.

⁸See Strobe Talbott, *Deadly Gambits* (New York: Knopf, 1984) for these remarks.

⁹For details, see David R. Jones, "Nuclear War and Soviet Policy," *International Perspectives*, November-December, 1982.

¹⁰N. V. Ogarkov, *Vsegda v Gotovnosti k Zashchite Otechestva* (Always in Readiness to Defend the Homeland) (Moscow, 1982), and D. R. Jones, ed., *Soviet Armed Forces Review Annual* (hereafter *SAFRA*) (Gulf Breeze, Florida: Academic International Press, 1982), volume six and volume seven.

balance of power: that Moscow is disproportionately dependent on land-based missiles; that bombers and cruise missiles carry nuclear warheads; and that submarine-launched missiles cannot be recalled.⁸ Apparently, such details do not concern him.

A psychological explanation would account for the apparent anomalies. According to this explanation, Reagan's primary concern was not the reality of Soviet power but its image, and specifically the image it derived as a consequence of prevailing perceptions of American power. Reality mattered less than perception. The perception of American lack of resolve had to be addressed. What President Jimmy Carter called the American malaise had to be exorcized. If this indeed was the true goal of the Reagan defense effort, then it was surely achieved. And, coincidentally, the interpretation augurs well for arms control. The perception of strength might be as illusory as the unnecessarily self-deprecating doubts of old. But if the administration wants to pursue real arms control, it is now much freer to do so, and to do so with confidence.

Moscow initially welcomed President Reagan's November, 1980, election victory. President Carter's initial human rights crusade, his late born-again bellicosity and his inability to control Congress exasperated Moscow. Soviet leaders preferred consistent conservatism. They felt able to deal constructively with Presidents Richard Nixon and Gerald Ford. President Reagan's ideological pronouncements were dismissed as electioneering fodder for the right wing. Once in office, he was expected to revert to traditional Republicanism.

During Reagan's first years, Moscow took care to appear accommodating. The Defense Department justified its pursuit of strategies and weapon systems designed to "prevail" in a nuclear war in part by asserting that this merely answered Moscow's challenge. Moscow's emphasis on the destructiveness of nuclear war was termed a smokescreen, designed to obscure continuing Soviet adherence to Lenin's Clausewitzian dictum that war is a rational continuation of politics. In reality, Soviet leaders vigorously distanced themselves from the dictum. Nuclear war was said to be "a threat to the whole of civilization . . . to life in our world"; nuclear war, once unleashed, would inevitably escalate; attempts to present such a war as rational were "criminal."⁹

The Soviet emphasis on the "criminal" nature of nuclear war wrought practical changes. Under Marshal N.V. Ogarkov, chief of the general staff, the early 1980's saw extensive organizational changes that were clearly designed to increase conventional flexibility and options and to allow at least for the possibility of large-scale conventional war. Soviet forces were made more aeromobile and more mobile across the board. Combined-arms "theater" armies, established in 1978, were provided with "rapid deployment" type divisions and corps, designed specifically to penetrate and rove deep behind enemy lines.¹⁰

Established nuclear programs did proceed. But Moscow downplayed their import. It insisted that its SS-20 deployments in Europe constituted a normal modernization program; newer, accurate, small warhead missiles were replacing the now old, less accurate, and therefore higher yield SS-4's and 5's. The SS-20's' mobility was seen as security-enhancing. The immobility of the SS-4's and 5's translated into vulnerability, which dictated early use.

By 1982, however, the North Atlantic Treaty Organization (NATO), which initially accepted the Soviet modernization thesis, appeared determined to reject the Soviet argument and press ahead with counterdeployments. The Soviet Union was deeply perturbed at the prospect of Pershing 2's. At the same time, rapidly growing West European opposition to American missile deployments, an opposition that swept churches, trade unions and town halls and reached into the inner sanctums of parties and governments, appeared to afford Moscow an extraordinary opportunity to split the alliance. Against President Reagan's gunslinger image, Moscow continued to juxtapose one of apparent Soviet moderation. President Leonid Brezhnev announced a moratorium on new SS-20 base construction.

But the Reagan administration's defense buildup and Pershing deployment preparations continued unabated. NATO solidarity held. West European alienation proved largely impervious to Soviet blandishment. Moscow's support for peace campaigns did more to spur independent (though of course far smaller) peace movements in the East than it did to increase Soviet influence over those in the West. The Kremlin was to become as leery of "peace" as the White House.¹¹ Thus the last months of the Brezhnev regime saw the emergence of a harder-line Soviet consensus, favoring significantly increased Soviet defense expenditures.

This decision was set aside by President Yuri Andropov. Domestic economic problems in the Soviet Union, the cost of reforms, and wary skepticism concerning the security ramifications of a reinvigorated arms race led to military-civilian agreement in Moscow that "détente" should be given one more chance.

Andropov's Soviet Union appeared to recognize from the beginning that the chance of an end-run through influence manipulation was slight. This, and extreme concern about the Pershings, was evident in the unprecedented concessions that Moscow offered during 1982-1983.¹² Andropov offered to slash Soviet Euromissiles and warheads to combined British and French levels, with no allowance for America's sea, carrier-borne and

¹¹The continuing strength of the "peace" movement was indicated by *The American Peace Directory, 1984* (Brookline, Mass.: Institute for Defense and Disarmament Studies, 1984), which listed 922 organizations.

¹²See *The New York Times*, December 22, 1982.

¹³See "Intelligence Data Suggests that Reagan Overstated Pace of Soviet Military Buildup," *Wall Street Journal*, October 31, 1984.

other "Forward Based Systems"; thus Soviet nuclear forces targeted on West Europe would have been cut to the level of the late 1950's. He also asserted (for the first time in public) and elaborated on Soviet willingness to accept some form of onsite inspection. NATO's "dual-track" decision had succeeded, beyond any reasonable expectations.

A WINDOW OF OPPORTUNITY

Clearly, the summer of 1983 offered an indisputable "window of opportunity" in terms of Soviet policy. The Reagan administration, however, was not ready to reciprocate. Rising pressure to do so, from allies and Congress, became perhaps the most important casualty of the Soviet downing of Korean Airlines KAL 007. The vitriol that flowed from that still not fully explained tragedy slammed the window shut. Pershing deployment proceeded. Moscow withdrew from negotiations, as expected. Growth in Soviet defense expenditures increased, from the previous two percent per annum norm to five percent.¹³ Washington pushed ahead, trying to lay the groundwork for Star Wars. Moscow publicized tests of a minishuttle and intensified its space defense research efforts. Washington oversaw further expansion of the Rapid Deployment Force, across-the-board conventional force improvements, and the development of NATO's new forward defense posture. Moscow further improved air-mobile (especially helicopter) capabilities and flaunted its own arsenal of air- and sea-launched cruise missiles.

Both powers increased the pressure on their allies to conform, although allied reluctance on both sides was manifest. Both became more assertive within their own "spheres," Moscow in Afghanistan and the Warsaw Pact; Washington in Grenada, Central America, and West Europe. Yet there was a sharp difference. Moscow hunkered down, protecting existing positions: Washington pursued outward assertiveness. Moscow gave aid, but refused commitment to Managua; Washington demanded that the Sandinistas "cry uncle," and extended the list of Sandinista actions that would be deemed to constitute *casus belli*, and hence justify military intervention.

The positions of the two superpowers had in a sense been reversed. American strategy had evolved from President Dwight Eisenhower's doctrine of massive retaliation, to war-fighting, and finally to war-prevailing (i.e., winning). Moscow's strategy had evolved from asser-

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"In spite of Gorbachev's close association with agriculture, it seems unlikely that the radical reforms required to improve agriculture and rural life will be undertaken. . . . The Soviet Union is paying a very high price for its failure to use the market to allocate the available supplies of consumer goods and services to its population."

Agricultural Productivity in the Soviet Union

BY D. GALE JOHNSON

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RURAL life in the Soviet Union is often portrayed as drab and monotonous.* Educational opportunities for young men and women are limited; cultural opportunities are few and poor in quality; housing lacks many modern facilities, like access to running water, and the countryside is being denuded of the well-educated and energetic by their outmigration to larger cities.

The migration of the better educated and more skilled younger workers occurs for reasons other than unsatisfactory living conditions in rural communities. Neither the collective nor state farms offer wages that encourage the best trained and most energetic to remain in agriculture. The inability to spend additional income because of the lack of goods and services is another negative factor in the neglected rural communities. The failure of the rural distribution system to serve adequately the needs of farm people was strikingly documented by the increase in the relative and absolute importance of payment in-kind to collective farm members, state farm workers and the increasing number of urban workers sent to the countryside to work on farms. The Soviet Union is paying a very high price for its failure to use the market to allocate the available supplies of consumer goods and services to its population.

But the picture is not all bleak; there has been substantial progress in reducing rural-urban differentials since the death of Stalin. Between 1970 and 1980, the difference in incomes between farm workers and industrial workers narrowed significantly. If the income from private plots of collective farm members is included, in 1970 urban incomes exceeded farm incomes by 25 percent; by 1980, the difference was little more than 10 percent.

The possession of consumer durables by farm households has increased substantially over the past decade, and as of the early 1980's there was little difference between rural households and all households. In 1965, there were 49 radios per 100 farm households; by 1983, there were 87, essentially the figure for the entire country. In

1965, there were 15 television sets per hundred households; in 1983 there were 85 sets—nearly the same as in the cities. By 1983, there were 73 refrigerators and 60 washing machines per 100 rural households, some 15 percent fewer than in all households. Clearly, there has been substantial progress in the availability of consumer durables.

While educational opportunities are less available in rural than in urban areas, there has been a narrowing of the gap in the past quarter century. In 1959, only 35 percent of the adult population of rural areas had completed primary education; by 1979, this figure had increased to 70 percent.

Dissatisfaction with rural life, as evidenced by opinion surveys, remains high. (Yes, there are opinion surveys in the Soviet Union, and some of the results are published.) Both Soviet and Western writers point to the high rate of migration from farm areas. However, the migration from farm areas has not been especially rapid; in fact, compared to other developed countries it has been relatively modest since 1950. In the Soviet Union, the farm population has declined by 50 percent. In the same period, the United States farm population declined by 75 percent. Declines in farm employment in West Europe have occurred at the same rate as in the United States.

Still, the growth rate in Soviet agriculture has declined sharply since 1950—from an annual rate of 5 percent during the 1950's to 3 percent during the 1960's and to 0.8 percent during the 1970's. The slow growth rate during the 1970's actually exaggerates the achievements of the decade, because almost all—if not all—the growth can be attributed to imported feeding materials that subsequently contributed to agricultural output and thus were counted as a part of the growth of agricultural output in the Soviet Union.

Perhaps even more striking was the fact that the growth of total factor productivity—the ratio of output growth to the growth of all inputs used in agriculture—became negative during the 1970's. During the 1950's, productivity growth in Soviet agriculture stood at the very respectable rate of 2.3 percent annually. Even the annual improvement in factor productivity of 1 percent during the 1960's was respectable. But during the 1970's farm output grew at a slower annual rate (–0.5 percent)

*Portions of this article originally appeared in D. Gale Johnson and Karen McConnell Brooks, *Prospects for Soviet Agriculture in the 1980's* (Bloomington: Indiana University Press, 1983). Copyright © Indiana University Press, 1983. Reprinted by permission.

than did the total inputs used in agricultural production. While some part of the poor productivity performance during the 1970's can be attributed to the poor climatic conditions that prevailed at the end of the decade, the negative productivity during the first half of the decade cannot be so explained.

The slowdown was due to several policy factors, like limitations on the amount of summer fallow, high seeding and planting rates, lags between the adjustment of procurement prices to increases in production costs and the inappropriate allocation of investments.¹ An overarching policy factor has been the unwillingness of planning and other ministry officials to give sufficient freedom to the farmers to act in the most efficient manner. In particular, the incentive structure has been inadequate. The very low yields of forage crops are not due to climatic factors or to the absence of appropriate technology but to the failure to reward workers or managers for more adequate performance.

Related factors are the acknowledged waste of fertilizer materials in transportation and storage, the failure to provide appropriate machines to be used with new tractor models, and waste in the procurement, processing, transportation and marketing of farm output. Each of these factors indicates the low priority that is given to agriculture or to the service sectors associated with agriculture.

But perhaps the most important cause of the slowdown in productivity growth was the increasing dependence of agriculture on the rest of the economy. Most specific inadequacies, including the perennial lack of spare parts, have long existed. But since 1950, the purchase of materials and services from the rest of the economy has increased substantially.²

Another indication of increased interdependence is the growth of capital stock, which consists primarily of goods and services purchased from the nonfarm sector of the economy. In addition, a larger share of the gross output of agriculture has moved off the farms over time. In 1959, only 40 percent of the gross output left the farms for commercial processing; in 1972, 52.4 percent was processed off the farms.³

As agriculture has become more dependent upon the nonfarm economy, the shortcomings of the nonfarm economy in providing goods and services to agriculture take on increasing significance. Fertilizer delivered too

late is nearly the same as no fertilizer at all; a tractor for which a spare part cannot be obtained is the same as no tractor at all. And output that is wasted in transportation or marketing had best not be produced in the first place.

THE RURAL INFRASTRUCTURE

The increasing interdependence of the agricultural sector and the rest of the economy has highlighted the condition of the rural infrastructure. The state of this infrastructure—schools, roads, cultural and entertainment facilities and communications and the availability of goods and services for purchase—influences the attractiveness of rural life.

The availability of goods and services to the rural consumer is a function of at least three things—the quantity of such goods or services produced; the distribution between urban and rural areas; and the degree of disequilibrium between supply and demand at the fixed prices in the state and cooperative stores. The satisfaction derived from the purchase of a product depends not only on the quality and the money price but on whether the product can be obtained with a minimum of time and expense. Whether they live in urban or rural areas, Soviet consumers have difficulty in obtaining many products, not because of the level of output but because of a pricing policy that results in a perpetual excess of demand compared to supply at the fixed nominal prices.

A careful reading of the Food Program and Prime Minister Leonid Brezhnev's speech in 1982 on the program help to explain the shortcomings of the rural infrastructure and why adverse production effects emerge. In his speech, Brezhnev recognized that there were significant social and cultural differences between the country and the city and that steps needed to be taken to reduce or eliminate the differences:

Measures for the social restructuring of the countryside are an organic part of the Food Program. This means the construction of well-appointed housing, mainly of the farmstead type, with outbuildings for personal auxiliary farming. The construction of schools, children's preschool institutions and clubs will be expanded. Medical, trade and consumer services to the rural population are being improved.

There is no need to prove that the more energetically and thoroughly we engage in the construction of housing, cultural and consumer-service facilities and roads in the countryside, the more productive peasant labor will become. Therefore, we plan to channel roughly 160 billion rubles into these purposes in the 1980's. This is a large number, even on our scale. But it's not only a large number. It's a major policy aimed at effacing the social differences between city and countryside—and, hence, at implementing one of our programmatic demands, scientifically substantiated by Marxism-Leninism.⁴

ROADS

The Food Program focused in part on the inadequate status of rural roads and transportation. Poor roads play a part in declining productivity because they affect both productive activity and the quality of farm life. It is

¹See D. Gale Johnson and Karen McConnell Brooks, *Perspectives for Soviet Agriculture in the 1980's* (Bloomington: Indiana University Press, 1983).

²D. Gale Johnson, Office of Agricultural Economics Research, the University of Chicago, "Food and Agriculture in the U.S.S.R.," paper no. 82:25 (November 30, 1982), pp. 11-12.

³*Ibid.*, p. 12.

⁴L. I. Brezhnev, "On the U.S.S.R. Food Program for the Period up to 1990 and Measures for Its Implementation—Report by Comrade L. I. Brezhnev," *Pravda*, May 25, 1982, pp. 1-2. Translated in *The Current Digest of the Soviet Press*, vol. 34, no. 21 (June 23, 1982), p. 6.

difficult to understand how rural roads could have been so long neglected by the government or, for that matter, why the farmers themselves have not done far more to improve their roads. The basic structure of rural roads in the United States was created by farm people themselves with limited government intervention. The collective and state farms have the administrative ability to create a reasonable rural road system from their local resources. It is a mystery why this has not occurred; an answer to this mystery might go a long way to help us to understand why factor productivity has declined in Soviet agriculture. The importance of rural roads as a factor affecting rural people's attitudes and willingness to work hard and productively is well made in the following quotation from a Soviet writer:

In discussing so-called rural culture, we should keep in mind that the material foundation or external trappings of culture cannot be separated from its spiritual context. A certain wise man has said that roads determine the level of a country's culture. By this yardstick, the level of our rural culture is not very high. We have hundreds and thousands of rural villages and very few paved roads. Villagers still rely largely on dirt roads for their contact with the outside world. These roads served very well in the days of horse-drawn vehicles, but for the modern car or truck they are impassable in bad weather. We've taken the peasant's horse away from him, without providing [a replacement] as a means of contact with the outside world. Sometimes rural people have to use tractors for transportation six months of the year. They aren't likely to take a tractor to go visiting or to see a play. True, they do manage to get hold of tractors to go fetch vodka, to go to market; or to get storebought bread at the district center.⁵

It is difficult to underestimate the magnitude of the task of providing all Soviet rural people with access to all-weather roads. The Food Program outlined what should be done about rural roads and transportation as follows:

To organize reliable transportation connections between collective farms and state farms and district centers. During the decade to build in rural localities approximately 130,000 kilometers of general-use roads and 150,000 kilometers of intrafarm roads.

To systematically increase the total length of rural bus lines, so that by 1990 almost all central settlements of collective farms and state farms will have bus connections with district centers.⁶

The road building program is an enormous one, requiring billions of rubles of investment. But if the calculations of Yu A. Mezhiburg, an economist in the Ministry of

⁵Boris Mozhayev, "From Remarks at the Round Table: The Easier You Go, the Farther You'll Get," *Literaturnoye obozreniye*, no. 4 (May, 1981), pp. 11–14. Translated in *The Current Digest of the Soviet Press*, vol. 33, no. 38 (October 21, 1981).

⁶Translation in *The Current Digest of the Soviet Press*, vol. 34, no. 12 (June 30, 1982), pp. 10–11.

⁷Yu A. Mezhiburg, "Present-Day Problems of Restructuring the Countryside," *Voprosy ekonomiki*, no. 5 (May, 1978), pp. 8–88. Translated in *The Current Digest of the Soviet Press*, vol. 30, no. 30 (1978), p. 6.

⁸*Ibid.*, p. 7.

Agriculture, are anywhere near the mark, even this large program will fail to provide adequate roads in rural areas until well into the next century.⁷ He declares that it is necessary to build between 900,000 and 1,000,000 kilometers of paved roads at a cost of 120 billion rubles in a 15-year program to provide all-weather roads for most of the rural population.

It is not obvious how far the proposed expansion of the rural bus lines would go in providing adequate service to the rural population. The proposal is to connect all the central settlements of farms to district centers. But even if this were accomplished, many settlements might be without bus service. While there are fewer than 50,000 collective and state farms, there are 400,000 rural settlements. And it is hard to believe that expansion of bus service can accomplish much until rural roads are improved.

Poor roads have real costs. The average life of a truck used in Soviet agriculture is about six years, well under half what it is in the United States. While the short life may be due in part to the poor quality of the trucks, anyone who has seen a dirt road in rural Russia can readily believe that the poor state of those roads has something to do with the short truck life.

I do not want to leave the impression that the inadequacies of the rural infrastructure are primarily responsible for the slowdown in growth of agricultural productivity and output in recent years. But it is highly likely that the Soviet rural infrastructure, including transportation inadequacies, biased the outmigration from agriculture in such a way as to rob rural communities of their best educated and most skilled younger workers. It may be that this selective aspect of migration inhibits the adoption of new and more profitable methods of production and thus has had or will have a long-run effect upon agricultural productivity.

FUTURELESS VILLAGES

Over the years various schemes for the restructuring of the countryside have appeared. Prime Minister Nikita Khrushchev set out to build agrogorods—urban type settlements. However, the enormous investment required and peasant resistance defeated him. In recent years nearly 350,000 small rural communities have been designated "futureless."⁸ Their population numbers more than 15 million; of these almost 14 million were in communities where the bulk of the population engages in agriculture. Almost one-sixth of the rural population lives in communities so designated. Apparently all settlements with less than 200 residents are futureless communities, and some with larger populations may also be cast into limbo. Once a community is designated futureless, steps are apparently taken to ensure it has no future.

On March 5, 1982, *Pravda* carried a story about a futureless town of 300 people just 40 kilometers from Alma-Ata. It lacks a kindergarten; its children have to walk 3 kilometers to school. It is a half hour's walk to a water pump. A canal that earlier permitted the spring

rains to run off is now silted, and spring floods are a frequent occurrence.

There's no denying that the future looks gloomy now for many futureless villages. Nearly 40 percent of Alma-Ata Province's 300 communities—with a total of 62,000 inhabitants—have been assigned to this category. But here is an interesting fact: In the past 10 years not a single one of these villages has disappeared from the province map. This indicates that the resettlement of the inhabitants of small villages is not a rapid process and must not be artificially rushed. . . .

But since this village, named Kuldzhinskoye, "is futureless and its population is subject to resettlement," it finds itself in a state of limbo. As a futureless village, "capital outlays will not be spent for constructing buildings and other facilities there. . . ."

How much loyalty, dedication, and hard work can a society expect when it washes its hands of 350,000 communities and 15 million people? An additional quotation from Boris Mozhayev, the author of the rural prose cited earlier, emphasizes the fragility of rural life:

It is time to make it clear that the rural way of life that has been conceived and established over the ages (I am referring to the good villages) has never tolerated and will not tolerate absurd and careless treatment. Every element in it—including the type of house and the place where it is built—is important to rural life, including rural culture. The social life of the old village and its spiritual climate were very stable and served to unify the peasants and give them a strong sense of communal identity. Everything played its role, from traditional children's games, which taught skills, comradeship and healthy rivalry, to the well-orchestrated sequence of Russian holidays, whose rituals, developed over the course of centuries, served to reinforce people's sense of common ties. Of course, the old rural way of life and the type of social intercourse associated with it either are ending or already have ended. But the people who plan life in the countryside must think about how all this can be replaced in order to prevent the spiritual ties among rural people from being broken. . . .

Farm people, whether living in futureless settlements or normal villages and towns, would find much greater satisfaction with their lives and circumstances if Soviet officials understood the lessons so well stated and acted in response to the lessons. If such had been the case for the past several decades, Soviet agriculture would today be performing much more closely to its potential.

The structure of farm communities in North America makes it very clear that you can have a highly productive agriculture with widely dispersed households. What is relevant is how quickly and at what cost these dispersed households can communicate with and travel to the communities that provide them with essential goods, services, cultural and educational facilities. With fast and low cost transportation, the size of the rural community is largely irrelevant to either economic productivity or the satisfactions people derive from their resources and way of life.

In addition to problems of infrastructure, Soviet planners have had substantial difficulties in creating an effective incentive system in which there is a significant rela-

tionship between effort and productivity, on the one hand, and reward or pay, on the other hand. Little progress has been made; one's income depends far more on the resource base of the collective farm of which one is by chance a member and on the income from the private plot than on how hard one works in the socialized sector. And in the case of state farm workers, wages are hardly dependent on the productivity of the farm. But even the inadequate system of incentives seems to have deteriorated further recently. I infer this from the emphasis in the Food Program on the provision to increase the importance of in-kind payments to permanent workers on state and collective farms and to temporary workers recruited for the harvest.

Increasing the importance of in-kind payments at the level of income reached in the Soviet Union is contrary to the pattern universally observed as economic development occurs. As real incomes increase in rural areas, the importance of payment in-kind systematically declines and eventually nearly disappears. At very low levels of real income a large fraction of the income of farm workers is received in the form of food products they produce. But as real incomes increase and the economy becomes more monetized, payment in-kind becomes less efficient and desirable and gradually diminishes. The modern socialist Soviet Union seems to be an exception to this pattern.

Brezhnev noted that the decline of payment in-kind (which he had worked hard to eliminate by requiring that collective farmers be paid in cash and on a regular basis) had "a negative effect on the interests of collective farmers and state farm workers. . . ." In-kind payments provide a positive incentive for work only when money has lost much of its value, either because goods and services are not readily available or because there is a dual price system, with the prices in one part of the system significantly higher than in the other. In a dual system, a wide range of goods is available in the system with higher prices and few desirable goods can be found in the system with lower stated prices.

The real value of in-kind payments compared to money is an indicator of the degree of suppressed inflation in the Soviet Union. Brezhnev recognized, apparently inadvertently, that in-kind payments were desirable because such payments were worth much more than money. It seems apparent that over time money payments provided a diminishing incentive for effort and work because of the inadequate performance of the price and distribution system in rural areas. Thus it is highly probable that productivity in agriculture was adversely affected by the deterioration of an effective price system.

Mikhail Gorbachev has emerged as the General Secre-

(Continued on page 342)

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"Increased drinking and smoking . . . have had a devastating impact on the well-being of the Soviet population. They have contributed heavily to the increase in infant mortality, which in turn has led to a rise in overall male mortality and a reduction in male life expectancy. To date, the party seems to have been powerless to arrest . . . the deterioration in public health levels."

The Emerging Health Crisis in the Soviet Union

BY DAVID E. POWELL

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IN recent years, Western experts on the Soviet Union have begun to express doubts about one of the regime's great achievements—the extraordinary improvement in public health. Even those who regard the Soviet system as politically despotic, economically incompetent, and corrupt to its very core have offered their grudging respect for the party's success in the sphere of medicine.

No one can doubt these achievements or fail to be impressed by them. Before the 1917 Revolution, life expectancy among women in Russia was 33; by 1966–1967 it had reached 74 and has stayed at about this level ever since. Among men, the figure rose from 31 to a high of 66 in the mid-1960's. A similar picture can be drawn with

respect to infant mortality, another key indicator of a society's well-being. In 1913, more than one out of every four children (268.6 per thousand live births) died before the age of one. By 1971, that figure had fallen to 22.9, an astonishing improvement in little more than half a century.¹

Both the increase in life expectancy and the decrease in infant mortality can be attributed chiefly to successful efforts in public health and sanitation. The authorities have brought under control many of the life-threatening diseases that had affected infants and young children, and they did away completely with certain debilitating illnesses. They have trained vast numbers of physicians, built large numbers of hospitals and polyclinics, and introduced an elaborate program of prevention and early detection. Despite continuing problems—rural-urban differences, technological backwardness, shortages of medicine and equipment, the generally low quality of medical care, and a sometimes irrational system of incentives and rewards for medical personnel—the overall improvement in public health is truly astounding.² Or at least it was.

Over the past decade or two, there has been a significant increase in infant mortality and adult male mortality, as well as a reduction in life expectancy among Soviet men. During the period 1955–1965, for example, the infant mortality rate fell steadily and rapidly; thereafter, it continued to fall, but at a less rapid rate, reaching the lowest level (22.9 per thousand live births) in 1971. Then, according to official data, it began to rise, reaching 27.9 in 1974. In response to this troublesome circumstance, the Soviet statistical authorities decided not to publish any additional information on the subject, so we do not know how matters now stand.³

An equally disturbing pattern can be seen if we look at changes in the crude death rate, that is, the number of deaths per 1,000 population, unadjusted for shifts in the age structure. The figure rose from 6.9 in 1964 to 10.3 in 1982, an increase of almost 50 percent. During this same period, life expectancy among males began to fall, after having risen for many years. It held steady at 66 for a brief time, then dropped to 65 and then again to 64; at that

¹*Narodnoe khoziastvo SSSR v 1973 g.* (Moscow, 1974), p. 43; Murray Feshbach and Stephen Rapaw, "Soviet Population and Manpower Trends and Policies," in United States Congress, Joint Economic Committee, *The Soviet Economy in a New Perspective* (Washington, D.C.: U.S. Government Printing Office, 1976); Christopher Davis and Murray Feshbach, *Rising Infant Mortality in the USSR in the 1970s*, U.S. Bureau of the Census, series P-95, no. 74 (Washington, D.C.: U.S. Government Printing Office, 1980).

²Christopher Davis, "The Economics of the Soviet Health System," in United States Congress, Joint Economic Committee, *Soviet Economy in the 1980's: Problems and Prospects*, part 2 (Washington, D.C.: U.S. Government Printing Office, 1983), pp. 228–264.

³Sergei Voronitsyn, "Some Strange Omissions in Soviet Demographic Statistics," *Radio Liberty Research*, RL 80/79 (March 9, 1979), p. 1. Western scholars have been engaged in a heated debate, trying to explain whether the increase is real or apparent. According to Feshbach and Davis, official Soviet data reflect a genuine rise in infant mortality. Jones and Grupp have suggested that much of the apparent rise is merely a statistical artifact, reflecting improved data collection and higher birthrates in Central Asia. See Feshbach and Davis, *op. cit.*; Ellen Jones and Fred W. Grupp, "Infant Mortality Trends in the Soviet Union," *Population and Development Review*, vol. 9, no. 2 (June, 1983), pp. 213–246; Murray Feshbach, "Issues in Soviet Health Problems," *Soviet Economy in the 1980's: Problems and Prospects*, *op. cit.*, p. 205, footnote 5. For a splendid survey of this entire issue, see Mark G. Field, "Soviet Infant Mortality: A Mystery Story," in D. B. Jelliffe and E. F. Jelliffe, eds., *Advances in International, Maternal and Child Health* (New York: Oxford University Press, forthcoming).

point, the data concerning life expectancy also disappeared from the standard Soviet reference books. According to Murray Feshbach, a leading American demographer, the situation has continued to grow worse: he estimates Soviet life expectancy today to be 61.9 years. If he is correct, the male-female differential has increased to 11.5 years, "an unprecedented gap among developed countries."⁴

The fact that the country's leaders continue to conceal information about infant mortality, adult mortality, and life expectancy points to continuing difficulties in this sphere. What is more, while we can identify the major causes that have led to the deterioration in the Soviet Union's basic health indicators, it is not possible to explain how important a role any single factor has played in the process. Soviet scholars and officials invariably point to three phenomena: alcohol abuse, smoking and environmental pollution. In addition, it seems clear that the poor performance of the agricultural sector has led to a drop in nutritional standards, and thus to increased morbidity and mortality. There is even reason to believe that changed life-styles associated with sedentary occupations and an urban environment—a lack of physical exercise, for example,—have reinforced this trend.

ALCOHOL ABUSE

On May 16, 1985, the Communist party's Central Committee adopted a resolution "On Measures to Eliminate Drunkenness and Alcoholism." The document expressed "serious concern" at the fact that these phenomena had "grown more acute . . . over the past several years." Existing legislation was "being implemented unsatisfactorily"; attempts to carry out the law invariably degenerated into "short-term campaigns, without the requisite degree of organization and consistency." The remainder of the statement identified major shortcomings in the battle against drinking and outlined the kinds of policies that would have to be adopted if "victory" were to be achieved.

While it is too early to assess the efficacy of the measures outlined by the Central Committee, there is good

⁴Feshbach, op. cit., p. 205.

⁵See, e.g., the decree of the U.S.S.R. Council of Ministers, *Pravda* and *Izvestia*, May 17, 1985, pp. 1–2, as well as the decree issued by the U.S.S.R. Supreme Soviet, *Pravda* and *Izvestia*, May 17, 1985, p. 2.

⁶Vladimir G. Treml, *Alcohol in the USSR* (Durham, N.C.: Duke University Press, 1982), p. 70; Vladimir G. Treml, "Alcohol Abuse and the Quality of Life in the Soviet Union," Kennan Institute for Advanced Russian Studies, *The Quality of Life in the Soviet Union*, Occasional Paper no. 191 (Washington, D.C., 1984), p. 36.

⁷*Molodoi kommunist*, no. 2 (1980), p. 64.

⁸*Posev* (Frankfurt), no. 5 (1979), p. 48.

⁹Cited in Vladimir G. Treml, "Alcohol in the USSR: A Fiscal Dilemma," *Soviet Studies*, vol. 27, no. 2 (April, 1975), p. 165, footnote 15.

¹⁰*Meditinskaiia gazeta*, December 25, 1970, p. 3; *Literaturnaia gazeta*, February 16, 1977, p. 13.

reason to be skeptical about the likelihood of their success. In particular, the resolution—like each of the various government edicts issued at the same time or shortly afterward—offers little that is new.⁵ Except for a few minor details, the new statements are merely an echo of countless policy pronouncements presented by party or government agencies in the years since the Bolshevik takeover in 1917. Besides, the alcohol problem has now reached such proportions that one wonders whether it can, in fact, be "solved."

According to the principal Western expert on this subject, the economist Vladimir Treml, the Soviet Union leads the world in the consumption of distilled spirits and ranks fourth or fifth in the intake of all alcoholic beverages. In 1980, per capita consumption came to more than 17 liters of absolute alcohol (i.e., 100 percent or 200-proof alcohol), including 3.5 liters of *samogon* (moonshine) and another liter of homemade wines and beers. Even more disturbing is the extremely rapid increase in consumption levels—approximately 4.4 percent annually over the past decade and a half. This is one of the highest rates in the world and it is exceeded by only three other countries.⁶

In 1980, a professor at the Academy of the Soviet Ministry of Internal Affairs, revealed that some 37 percent of the country's male workers "abuse" alcoholic beverages.⁷ A similar finding has been reported by a Soviet émigré who worked for many years in the Soviet Procuracy. According to Friedrich Neznanskii, a survey conducted in Moscow Province in the late 1970's indicated that approximately 30 percent of the working-class males in the cities and towns around Moscow were chronic alcoholics.⁸

The reduction in male life expectancy that began in the late 1960's is unquestionably linked to the dramatic increase in alcohol consumption. As long ago as 1963, the Soviet demographic Boris Ulanis noted that "without doubt a radical reduction in the consumption of alcohol would lead to a reduction in [male-female] life expectancy differentials."⁹

The recent rise in the crude death rate is also partly attributable to increasingly heavy drinking. Mortality levels among those who drink "systematically" are almost twice those found among nondrinkers, and there are equally striking differences between male and female mortality levels for most age groups. Indeed, among individuals in the 20–45-year-old bracket, the mortality rate for men is three times higher than that for women.¹⁰

At the present time, alcoholism and the diseases associated with it are the third leading cause of death in the country; only cardiovascular diseases and cancer take more lives. In fact, given the close correlation between heavy drinking, on the one hand, and cardiovascular problems and cancer on the other, many medical experts are inclined to rank alcoholism first or second. Some have termed it "the great killer," noting that the life expectancy of an alcoholic is typically 10–15 years lower than that of a nondrinker. But long before the question of premature

death ever arises, it is clear that anyone who drinks large quantities of alcohol over an extended period of time risks damaging virtually every part of his or her body. In the Soviet Union, so many people are to be found in this category that Iu. Tkachevskii, a leading Soviet jurist, once compared the destructive force of alcoholism with that of nuclear weapons.

Illustrative in this regard is the study carried out by O. P. Chekaida and her colleagues at the Second Moscow Medical Institute, comparing morbidity rates among 319 male problem drinkers employed at a major industrial enterprise with a control group of equal size. (The latter group was identical to the former in terms of sex, age, job and level of seniority; none of its members had a drinking problem, however.) The researchers discovered that morbidity levels—measured by the number of illnesses preventing an individual from working, as well as by the total number of work days lost annually—were almost twice as high in the former group as in the latter. In addition, it turned out that morbidity among alcoholics in the experimental group was approximately 1.5 times that among problem drinkers who showed no identifiable signs of alcoholism.¹¹

Similarly, N. Ia. Kopyt's analysis of male problem drinkers revealed that more than half (52 percent) of such individuals required medical attention at least once every year for some new ailment, including some people who had several different complaints. (Among chronic alcoholics, the figure was 59 percent). Another third (32.3 percent) of the sample sought help at least once a year during two of the three years under investigation. An additional 15.3 percent were ill only once during the three-year period, and a mere 6.6 percent did not have to turn to a doctor even once.¹²

Other scholars have investigated the effects of alcohol on one or another major category of disease. With predictable, almost monotonous, regularity, they find significant correlations between alcoholism and pre-alcoholic forms of alcohol abuse, on the one hand, and these various ailments, on the other. But the problem lies not only in the fact of an increased likelihood of becoming ill:

¹¹*Sovetskoe zdavookhranenie*, no. 5 (1976), pp. 50–53.

¹²*Zdavookhranenie Rossiskoi Federatsii* (hereafter cited as *ZRF*), no. 4 (1976), pp. 27–31.

¹³See the article by A. K. Kachaev in *Problemy alkogolizma* (Moscow, 1970), pp. 262–265.

¹⁴See Feshbach, op. cit., p. 206.

¹⁵John Dutton Jr., "Changes in Soviet Mortality Patterns, 1959–1977," *Population and Development Review*, vol. 5, no. 2 (June, 1979).

¹⁶Richard Cooper, "Rising Death Rates in the Soviet Union: The Impact of Coronary Heart Disease," *New England Journal of Medicine*, vol. 304, no. 21 (May 21, 1981), pp. 1259–1265. See also Richard Cooper and A. Schatzkin, "Recent Trends in Coronary Risk Factors in the USSR," *American Journal of Public Health*, vol. 72, no. 5 (May, 1982), pp. 431–440.

¹⁷*Sotsialisticheskaia industriia*, June 8, 1972, p. 3. See also *ZRF*, no. 6 (1977), p. 28.

equally important, gastrointestinal, circulatory and pulmonary diseases generally assume a more serious form among alcohol abusers, and their symptoms and after-effects linger significantly longer.

Much more than discomfort and pain are involved, of course; many of these illnesses can lead to premature death. For example, tuberculosis is encountered 10 times more often among problem drinkers, and 16 times more often among alcoholics, than among the rest of the population. Furthermore, death rates from tuberculosis among men are twice as high as they are among women, a circumstance that has been explained in large measure by the higher incidence of alcohol abuse among men.¹³ The consequences of circulatory diseases—a term that includes all heart- and blood-related illnesses—have been even more catastrophic. One-third of all cases of coronary heart disease can be linked to alcohol abuse, and an even higher percentage of cases among people over the age of 30 are alcohol-related.¹⁴ According to the American scholar John Dutton Jr., diseases of the circulatory system have been the major factor behind the recent rise in the Soviet death rate: the rate of increase in mortality among patients with such illnesses has been twice that of the overall increase in mortality.¹⁵ Heart diseases now account for 51.3 percent of all deaths in the Soviet Union, a circumstance that has led one Western analyst to speak of an "epidemic" of coronary heart disease in that country.¹⁶

There is also a strong correlation between problem drinking and liver dysfunction. When the liver—the organ that metabolizes alcohol—is "overloaded," it cannot perform its function adequately. Thus, men and women who continue to drink heavily run a serious risk of developing "fatty liver," alcoholic hepatitis or even cirrhosis of the liver. How widespread these conditions are cannot be determined, for Soviet statistical handbooks, medical journals, learned commentaries and other sources almost always deal with this issue in general terms. Still, one report has revealed that the death rate from cirrhosis of the liver is ten times higher among alcoholics than among moderate drinkers and abstainers. (Unfortunately the study failed to provide any indication of the incidence of this disease.¹⁷ We can only surmise that there has been a deliberate attempt to conceal highly embarrassing facts.)

To be sure, not all the deaths from the diseases we have noted can be attributed to alcohol addiction; stress, lack of exercise, the deterioration of diet, the aging of the population, and other factors have also played a role. Still, it is important to recognize that Soviet specialists invariably point to the role of alcohol as a dominant force in this tragic situation.

One segment of premature mortality can be linked directly to alcohol consumption; roughly 40,000 Soviet citizens die each year from alcohol poisoning, either from *samogon* or from contaminated liquor bottled and sold by the state. This is an enormous number of people; on a per

capita basis, it is almost 100 times the United States figure.¹⁸

Perhaps the saddest result of alcohol abuse involves damage done to the children of women who drink. The rapid rise in alcoholism among Soviet women means that the problem is becoming increasingly urgent. Soviet studies, like those carried out in the West, show that pregnant women who are alcoholics are more likely than nonalcoholics to have miscarriages, premature births, and small, vulnerable babies. There is also a higher incidence of infant mortality among the offspring of female alcoholics, as well as a higher incidence of mental retardation and other serious physical defects. Finally, there is a strikingly close correlation between the seriousness of the mother's drinking problem and the severity of her child's defects: pregnant women who consume even small quantities of alcohol (especially during the first trimester) can do harm to the fetus, and those who drink a lot are apt to do more damage.¹⁹

The most valuable work on this topic was conducted in the 1970's. Researchers from the Moscow Psychiatric Research Institute discovered that among female alcoholics, the incidence of miscarriages, stillborn infants and children who died before the age of two was three to five times the figure for the entire population of pregnant women. The incidence of mental retardation among the children of these women was ten times higher than that for the population as a whole; in fact, fully one-third of all pregnancies among alcoholics resulted in the birth of a retarded child.²⁰

While we simply do not know how much all of this contributes to the overall rise in infant mortality in the Soviet Union, or to the general rise in mortality levels, there is reason to believe that alcohol plays a vital role. One Western observer has estimated that roughly half of all hospital beds in the country are occupied by people "whose illness [is] associated with alcohol-related problems,"²¹ and Soviet sources acknowledge that problem drinking among women has increased to such a degree that special women's sections have been established in "sobering-up stations" (*meditsinskie vytrezviteli*). These developments provide vivid evidence of a public health crisis.

¹⁸Vladimir G. Treml, "Death from Alcohol Poisoning in the USSR," *Soviet Studies*, vol. 34, no. 4 (October, 1982), pp. 488-489.

¹⁹See the article by N. Ia. Kopyt in F. Ia. Kofman and V. P. Pogorelskii, eds., *Sotsial'nye problemy zdoravookhraniia*, vol. 36 (Moscow, 1975), pp. 46-47; *ZRF*, no. 8 (1976), pp. 9-14; G. V. Morozov et al., eds., *Alkogolizm* (Moscow, 1983), p. 8.

²⁰*Sotsiologicheskie issledovaniia*, no. 1 (1980), p. 96.

²¹Cited in Feshbach, op. cit., p. 226.

²²Z. N. Karimov, *Kurenii—put' k stradaniiam* (Tashkent, 1983), p. 3.

²³V. G. Zaporozhchenko, *Obraz zhizni i vrednye privyчки* (Moscow, 1984), p. 19; Karimov, op. cit., p. 3; I. Katkova, "Rol' zdoravookhraniia v demograficheskoi politike," in D. I. Valentei, ed., *Nashe zdorov'e* (Moscow, 1982), pp. 49-50; O. G. Frolova, *Polovoe vospitanie devochek* (Moscow, 1982), pp. 49-50.

SMOKING

Smoking is also recognized as a major source of damage to the health and welfare of Soviet citizens—not as damaging as alcohol abuse, perhaps, but extremely harmful nonetheless. Researchers in the Soviet Union, like their colleagues in the West, have turned up a mountain of data incriminating tobacco and linking it with increased levels of morbidity and mortality among users. While Soviet scientists deal only with statistical correlations, rather than with the certainties of cause and effect, their findings have been fully accepted by public health officials in that country. Besides, unlike the situation in nations with a powerful "tobacco lobby," the question of whether or not correlation implies causality is a nonissue, at least in the published literature.

Smokers have a perceptibly shorter life expectancy than nonsmokers—7 to 15 years less, depending on how heavily they smoke. It is estimated that among men under the age of 65, cigarettes are responsible for 90 percent of all deaths due to lung cancer, 75 percent of all cases of bronchitis, and 25 percent of all instances of ischemic heart disease. Among long-term male smokers aged 40-59, the likelihood of sudden death is 3 to 6 times greater than among nonsmoking men of the same age.²²

Equally important, there are strong statistical ties linking such factors as the number of cigarettes smoked per day, how powerfully one inhales, and the age at which one begins to smoke, with the increased incidence of disease, its severity, and the likelihood that it will lead to premature death. Unfortunately, any attempt to make direct comparisons between these and American or West European findings would be misleading: Soviet tobacco tends to be far stronger, burns more slowly and probably has more impurities than the tobacco used by Western companies. As a result, the physical damage done by each cigarette is undoubtedly far greater in the Soviet Union than in the West. This circumstance is susceptible to change, however; American cigarettes have begun to appear on Soviet shelves in recent years and, while they contribute only marginally to total consumption, they are extremely popular.

There are also powerful relationships between smoking and the probability, as well as the severity, of damage to unborn infants. Children of smokers are likelier to emerge from the womb stillborn, premature, with lower-than-average birth weights, and/or with physical or mental defects than are the offspring of nonsmokers. Pregnant women who smoke less than half a pack a day experience infant mortality rates that are 20.8 percent higher than is the case with nonsmokers.²³

(Continued on page 339)

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"A Sino-Soviet détente radiating from within the superpower triad will have several important effects. . . . The most immediate, foreseeable outcome is the return of a more even-keeled mode of diplomacy in the Sino-American and the Sino-Soviet relationships."

Soviet-Chinese Détente

BY JAMES C. HSIUNG

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SOVIET relations with China in the first half of the 1980's witnessed a slow but steady course toward détente, which was intriguing in view of the almost twenty-year history of the Sino-Soviet split. The new developments were even more interesting in view of the Soviet-American deadlock and the modesty of Sino-American activities. Although no immediate breakthroughs were in sight, the two Communist nations shared a common desire to bring normalcy to their relations.

The first round of the current negotiations began in the fall of 1982, and more sessions were held alternately in Beijing (October) and Moscow (March) each year. Reversing its previous position, Beijing dropped its insistence that Moscow show "deeds" before talks. This change in attitude meant that nonpolitical agreements were possible before political issues were resolved. Some functional agreements were signed, spurring cooperation in meteorological and environmental monitoring, exchanges of publications, and so forth. Bilateral trade for 1984 increased to \$1.2 billion, and was estimated at \$1.6 billion for 1985. Border trading towns were opened at a number of points, indicating a return of tranquility to the borders.

There have been exchanges of visits by officials, scholars, and experts, culminating in the visit to Beijing by First Deputy Prime Minister Ivan Arkhipov in December, 1984. Arkhipov was the highest ranking Soviet official to visit China since Prime Minister Aleksei Kosygin's stopover at the Beijing airport to meet with Chinese Prime Minister Zhou Enlai in the fall of 1969. During his mission, Arkhipov concluded three accords: 1) an agreement on economic and technical cooperation, 2) an agreement on scientific and technological cooperation, and 3) an agreement on the establishment of a Sino-

Soviet committee for economic, trade, scientific and technological cooperation.¹

Although few details were known, these agreements resembled at least in form the agreements of the 1950's at the height of the Sino-Soviet alliance. Beijing regarded Arkhipov's visit as a "new starting point on the road to normalization of relations."² In Moscow's view, these agreements would benefit both sides economically and, more important, would create a favorable atmosphere for the promotion of mutual understanding and trust. In July, 1985, Beijing sent Vice Prime Minister Yao Yilin to the Soviet Union to finalize a long-term trade treaty that would upgrade annual bilateral trade to \$3.5 billion. Other agreements signed by Yao covered specific bilateral economic and technological cooperation and Soviet assistance to help China build a number of large industrial plants, including three powerful thermal-energy generating stations and an open-pit coal mine capable of producing 20 million tons of coal per year.

A number of other important developments, moreover, held political significance. For example, in early March, 1985, on the eve of sending to the United States a Soviet delegation headed by Politburo member Vladimir V. Shcherbitsky, Moscow received a visiting delegation from the Chinese National People's Congress (NPC). This was the first contact between the Parliaments of the two Communist countries in more than 20 years. To the funeral of President Konstantin U. Chernenko, in the same month, the Chinese sent one of their most promising Vice Prime Ministers, Li Peng. An adopted son of the late Zhou Enlai, Li was educated in Moscow in the 1950's and is believed to be a contemporary of Mikhail Gorbachev, the Soviet Union's new Communist party General Secretary. The two met to confer in private. The occasion itself was the high-water mark in official Sino-Soviet contacts in two decades. The substance of the talks was even more significant. Among other things, each of the leaders reaffirmed his own government's reciprocal desire to improve bilateral relations.³

The Sino-Soviet détente course is not likely to be reversed.⁴ The question is: why? In other words, why are the Chinese and the Soviets both interested in pursuing détente?

The Chinese determination to mend their long-standing split with the Soviet Union has sometimes been attrib-

¹*The New York Times*, December 30, 1984, p. 1.

²*Da Gung Bao* (Hong Kong), December 24, 1984, p. 1. According to *Beijing Review*, "Observers in Beijing characterized [the Arkhipov visit] as an 'economic visit with political overtones,'" January 7, 1985, p. 6.

³"Gorbachev's Meeting with Li Peng," *Izvestia*, March 15, 1985, p. 3.

⁴See, for example, Sheldon Simon, "Southeast Asia in the Sino-Soviet Tangle," in James C. Hsiung, ed., *Beyond China's Independent Foreign Policy: Challenge for the U.S. and Its Asian Allies* (New York: Praeger, 1985), p. 84.

uted, in United States scholarly circles, to the "failures" of President Ronald Reagan's China policy. Because of his pro-Taiwan sentiments, it has been argued, President Reagan has alienated the leaders of the People's Republic of China (PRC), impelling them to play the "Soviet card." While this argument sounds plausible, it may not be supportable empirically.⁵ Instead, domestic political shifts and strategic concerns seem to offer a more convincing explanation for China's new stance.

One important outcome of the "Dengization" of post-Mao Chinese politics has been an overhaul of China's foreign policy. In the first place, the Chinese took the initiative in 1979 to seek a new structure of relations with Moscow through negotiations. On April 3, 1979, in announcing its decision not to renew the Sino-Soviet treaty of alliance the following year, Beijing simultaneously emphasized that the differences between the two countries should not hamper the development of normal state relations. Soviet diplomats, whose similar overtures had been spurned by Beijing earlier, readily accepted the Chinese offer to resume talks. The negotiating process, begun in September, was interrupted by the Soviet invasion of Afghanistan, and was not resumed until 1982.

It is important to note that the Dengist efforts to carve out an "independent" foreign policy course emerged after the sixth plenum of the eleventh party congress, in June, 1981. At the session, Hua Guofeng was replaced by Hu Yaobang, a Deng protégé, as General Secretary of the party. This new policy has a number of components, including improving relations with China's Soviet neighbor; continuing the friendly ties with Washington but avoiding any commitments which might upset Moscow; and renewing friendship with the third world. The final shape of China's new "independent" foreign policy was not set until the twelfth party congress in September, 1982. Nevertheless, after 1981, Beijing began ostensibly to distance itself from Washington.⁶ The fact that this

⁵For elaboration, see James C. Hsiung, "Reagan's China Policy and the Sino-Soviet Détente," *Asian Affairs*, vol. 11, no. 2 (Summer, 1984), pp. 1-11; also Hsiung, *Beyond China's Independent Foreign Policy*, pp. 167-170.

⁶Officials like Prime Minister Zhao Ziyang and Foreign Minister Huang Hua began to characterize the United States as a "bad" superpower like the Soviet Union. Such unkind language is reminiscent of earlier portrayals during the reign of the radicals before Mao's death. Christopher Wren, "China Attacks the Foreign Policy of the U.S.," *The New York Times*, December 28, 1981.

⁷This was confirmed to me by Li Shenchu, director of the Institute of American Studies, Chinese Social Science Academy, in Beijing, during the summer of 1984. On the linkage between China's domestic shakeups before the twelfth party congress and its new foreign policy, see Carol Hamrin, "Emergence of an 'Independent' Chinese Foreign Policy and Shifts in Sino-U.S. Relations," in James C. Hsiung, ed., *U.S.-Asian Relations: The National Security Paradox* (New York: Praeger, 1983), pp. 63-84.

⁸Initial findings and a brief description of my study are contained in Hsiung, *Beyond China's Independent Foreign Policy*, chapter 7.

conspicuous shift began nearly one year after President Reagan took office is additional proof that the President's pro-Taiwan stand, which had been known at least from the campaign of 1980 on, had no direct bearing on Beijing's new policy.

In 1982, at the twelfth party congress controlled by the Dengists, three fundamental doctrinal changes bearing on foreign policy (more particularly on Sino-Soviet relations) were made.

First, the Maoist "three world theory," which had been used in effect to justify a global "united front" against the Soviet Union, was shelved. China, nevertheless, continues to insist on the importance of the third world.

Second, the Maoist doctrine of the "inevitability of war" with the imperialists and "socialist imperialists" as well was abandoned. Since this had been an area of severe disagreement with Moscow since the days of Soviet Prime Minister Nikita Khrushchev, the reversal removed a huge obstacle to an eventual reconciliation between the two Communist parties, which have had no contacts since 1963.

Third, Beijing now subscribes to the view that it is possible for China to have conflictual relations with socialist countries, just as it is possible to have cooperative relations with capitalist nations. This shift anticipated a Chinese readiness to recognize the Soviet Union once again as a socialist (as opposed to a "revisionist") country. It also anticipated cooperation and conflict with the Soviet Union.⁷

These fundamental changes followed the final removal of the remnant Maoist elements from the party and the Dengists' consolidation of power. They no doubt paved the way for an uninhibited attempt to upgrade relations with the Soviet Union for the sake of mutual benefits.

STRATEGIC CONSIDERATIONS

The general impression is that China was a beneficiary of the concept of the "romantic triangle" that existed in the 1970's, in which China was aligned with the United States against the Soviet Union. This impression was substantiated in my own empirical study of the dynamics of the Sino-United States-Soviet triad as a "three person game."⁸

For its own security China was ready to seek accommodation with a Soviet Union that was fast moving ahead as a military power in the 1980's. The Chinese no longer felt secure in a structure inherited from the latter half of the 1970's, when they found themselves in an anti-Soviet league with the United States. The situation of the early 1980's, from Beijing's standpoint, was different from that of the early 1970's, when Washington was enjoying détente with Moscow while cultivating an "opening" with China. Although President Reagan's confrontation with the Soviet Union may have seemed reassuring, the Chinese paradoxically felt insecure as long as the United States-Soviet war of nerves continued, especially because Sino-Soviet tensions continued.

The Chinese see the Soviet threat issuing from two sources. One is the Soviet encirclement, as perceived from Beijing, that stretches from Vladivostok to Indochina through a Soviet-occupied Afghanistan and an India allied with Moscow. Thus, Soviet involvement in Kampuchea and Afghanistan is one of the obstacles to better relations with China. The other obstacle is the Soviet missile threat, including the SS-20 intermediate-range nuclear missiles. From the Chinese point of view, neither the continuance of an unbridled nuclear arms race nor an INF (intermediate nuclear force) agreement between the two superpowers would be sufficient for China's security. In the first instance, an increasing number of the Soviet SS-20's would be deployed in Asia as well as in Europe. In the event of a United States-Soviet INF control agreement, China fears the Soviet Union might simply retarget some of its SS-20's from Europe to Asia.

SOVIET RATIONALE

Strategic considerations have likewise featured prominently in the Soviet disposition to seek an amelioration of relations with China. The conventional wisdom that the Soviet Union suffered from Sino-American amity in the late 1970's is also borne out empirically. Soviet relations with both Washington and Beijing were adversely affected by the prospects that a quasi-military alliance might be hatched between the latter two. Although the Soviet-Chinese relationship was not so badly affected as the Soviet-American relationship and in fact there were some slight improvements in Soviet-Chinese relations, the Soviet Union gained nothing substantial to offset losses from its deteriorating relationship with the United States.⁹ The most cogent lesson for Soviet leaders was that they could ill-afford to see the deterioration of Soviet relations with both Beijing and Washington.

The turning point in Soviet policy toward China came sometime in the winter of 1978. In August, China had signed a peace treaty with Japan, including an "antihegemony" clause, which aroused heightened concern in Moscow. The Soviet Union protested to Japan and characterized the relations among China, Japan and the United States as "signs of the first step leading to a new military alliance."¹⁰ In response, Moscow drew closer to Vietnam, first admitting it to CMEA (the Council for

⁹Ibid., p. 121.

¹⁰*Krasnaia zvezda*, September 17, 1978, cited in *Asian Survey*, no. 1 (1979), p. 37. D. V. Petrov, "Yaponon-Kitayskie otnosheniya: problemy i tendentsii" (Japan-China Relations: Problems and Tendencies), *Problemy Dal'nego Vostoka*, no. 4 (1984), pp. 26-27; V. Grishin, "Opasnyi Al'yans" (Dangerous Alliance), *Novoye Vremya*, no. 36 (1984), p. 4.

¹¹The draft of the treaty can be found in Rodger Swearingen, *The Soviet Union and Postwar Japan* (Stanford: Hoover Institution Press, 1978), pp. 289-291.

¹²Peter Berton, "A Turn in Sino-Soviet Relations?" in Hsiung, *Beyond China's Independent Foreign Policy*, p. 34.

¹³Gilbert Rozman, "Moscow's China-Watchers in the Post-Mao Era: The Response to a Changing China," *China Quarterly*, no. 94 (June, 1983), pp. 237-238.

Mutual Economic Assistance) and then signing with it a Treaty of Friendship and Cooperation, in essence a quasi-military alliance against China. The subsequent normalization of United States relations with China, announced in December, 1978, must have reinforced the Soviet perception of an emerging United States-China-Japan grand alliance.

At some point during this critical period, Soviet leaders apparently decided to forestall such a catastrophic event by resorting to a two-pronged strategy. On the one hand, they continued to pressure Japan to sign a treaty of cooperation, designed to wean Japan from collusion with China and the United States.¹¹ On the other hand, they held out an olive branch to the Chinese. Despite continuing verbal attacks against Beijing in the official Soviet press, Foreign Minister Andrei Gromyko, in a note to Chinese Ambassador Wang Youping on April 17, 1979, accepted the April 3 Chinese proposal for negotiations. Sino-Soviet talks were held in Moscow between September 27 and November 30 at the vice ministerial level. Before the Afghanistan invasion interrupted the talks, both sides had agreed to an expansion of trade relations and of scientific, technological, cultural, and sports exchanges, although they disagreed on the approach to resolving outstanding political issues.¹²

Two events subsequently helped to sustain the momentum of the Soviet drive to normalize relations with China. One was the unequivocal triumph of the Dengist faction in China, dating from Hua Guofeng's ouster as party chief in June, 1981. Soviet President Leonid Brezhnev apparently came to the belief that China under Deng was truly different from Maoist China, and that the prospects of bettering relations with Beijing were brighter than at any point in the past two decades. Hence, in his Tashkent speech in March, 1982, Brezhnev invited the Chinese to resume the negotiations interrupted by the Afghanistan episode. Speaking on Soviet Asian policy in general, he simultaneously made an appeal for better relations with "our Japanese neighbors."

In taking the new initiative, Brezhnev found himself in agreement with the moderates among Soviet sinologists, headed by S. L. Tikhvinsky, who heads the Soviet Institute of Foreign Affairs, and M. S. Kapitsa, vice minister for foreign affairs. Kapitsa made an "unofficial" visit to China in May, 1981. In contrast to the views of hardliners headed by Professor O. B. Rakhmanin, who sometimes wrote under the pseudonym of "O. B. Borisov," these moderates believed that, despite its leanings to the "right," China had not yet lost its socialist character, and that the Beijing-Washington collusion against Moscow would eventually crumble.

In addition, they believed that China's internal policies had a good chance of returning to the Soviet model, that its "independent" foreign policy struck a less anti-Soviet posture, and that improving relations would benefit both countries.¹³ Brezhnev also went out of his way to placate the Chinese by reaffirming a "one China" policy, which

recognized China's sovereignty over Taiwan, and by denouncing the "two Chinas" concept. The oblique reference to Washington was transparent. Chinese receptiveness to Brezhnev's imprimatur ushered in the new alternate rounds held in Moscow and Beijing.

The other source of impetus came in mid-1984, when the Soviet Union faced what Richard Thornton calls a "crisis point in Soviet strategy."¹⁴ In the first place, the Soviet Union suffered a major geopolitical setback in southwest Asia, while basically holding its own in Europe and the Far East. The setback was Moscow's failure to gain additional footholds in southwest Asia by exploiting the Iran-Iraq war; it misplayed its hand and lost an opportunity to draw Iran into the Soviet orbit. Second, the double shock of agricultural failures at home and the precipitous decline of petroleum prices on the world market put Moscow's military buildup in jeopardy. The money to pay the bill was simply not available. The only way out, in the short run, was to squeeze the satellite economies harder and to begin to borrow more from the West, which would require policy adjustments to strengthen Soviet political leverage.

Third, and more important, United States ballistic missile defense developments (e.g., a successful ABM [Anti-Ballistic Missile] test above Kwajalein Island on June 10, 1984) raised the unhappy prospect that Moscow's 20-year investment in offensive ballistics technology would soon be obsolete.

Since Khrushchev's removal from power, the Soviet leadership has embarked on a long-term effort to achieve military superiority over the United States. Two assumptions underscored the ambitious program: 1) that military superiority was a necessary and sufficient condition to alter the existing geopolitical balance to Soviet advantage, and 2) that the cost of attaining that superiority could be borne without inflicting undue hardship upon the Soviet people.

By mid-1984, it was evident that the validity of both assumptions was in doubt. Hence, the strategic "crisis point." The plight was further aggravated by the succession crisis upon Brezhnev's demise in November, 1982, and the deaths of Presidents Yuri Andropov in February, 1984, and Konstantin Chernenko in March, 1985.

Moscow's response to the strategic "crisis" was twofold. First, by a decision on June 29, 1984, it agreed to return to the strategic arms talks with the United States. The sense of crisis must have weighed heavily on the Soviet leaders; they decided to return in the absence of any new concessions from Washington although the

Soviet side had withdrawn from the Geneva talks in late November, 1983, to protest the United States deployment of Pershing 2 and cruise missiles in Europe.

Second, the Soviets decided to play the "China card" more earnestly. The Arkhipov mission, postponed from May, 1984, in the wake of President Reagan's visit, finally arrived in China in December that year. The momentum continued under the leadership of Gorbachev. When he became head of the Soviet Communist party, Gorbachev immediately announced to the party's Central Committee that he would work earnestly for a significant improvement in Sino-Soviet relations.¹⁵

Contacts in many areas were expanding in 1985. Besides the July Yao Yilin mission to Moscow, a new agreement was signed in Beijing on June 4, 1985, regarding the exchange of press representatives between Tass, the Soviet news agency, and Xinhua (New China News Agency). A Soviet delegation arrived in Beijing on May 30 to discuss better consular relations. One has reason to expect more exchanges and agreements in the time ahead, as long as Moscow's China card-playing continues and Beijing reciprocates.

The Soviet strategic reorientation toward China was prompted by a concern to stave off what appeared to Moscow to be an anti-Soviet grand alliance consisting of China, the United States and Japan in the late 1970's. China's turnaround, with its "independent" foreign policy, has helped ease much of the Soviet anxiety. Soviet leaders foresee a détente with China as a necessary condition for strengthening Moscow's hand in dealing with the United States as well as reuniting the socialist camp. At a minimum, if Soviet relations with China are restored to normalcy, the chances of Washington ganging up with Beijing against Moscow will diminish considerably.

Besides, when the Soviet Union does not have to expend as much of its resources in a running feud with the Chinese, it will be able to concentrate on domestic problems and on mending its fences within the socialist world. This will ultimately strengthen the Soviet Union in its relations with the United States. It should be noted that the intent of the Soviet decision of June 29, 1984, was not just to resume the nuclear arms control talks, but to engage the United States in negotiations covering the entire spectrum of Soviet-United States relations, including trade.

The Chinese were the first to discover the "law of optimality," as it were, within the superpower triad. In addition to cultivating a working relationship with the other superpowers, China now encourages them to re-establish a dialogue. At the analytical level, improvement in the relations between any two powers (in any dyad) will be good for the relations between the other two and, hence, stabilizing to the three powers as a whole. Essentially, this is the virtue of a *ménage à trois*.¹⁶ In practical terms, as the weakest power in the superpower triad, China can benefit more from both superpowers if there is triad-wide harmony. For only then can China receive aid

¹⁴Richard Thornton, *Is Détente Inevitable?* (Washington, D.C.: The Washington Institute for Values in Public Policy, 1985. East Asian Forum Series), p. 2.

¹⁵According to a report by Vice Prime Minister Li Peng, upon return from Moscow, in *Renmin ribao*, March 15, 1985, p. 1.

¹⁶This idea was suggested in Lowell Dittmer, "The Strategic Triangle: An Elementary Game—Theoretical Analysis," *World Politics*, vol. 33, no. 4 (July, 1981), pp. 485-515.

for its gargantuan modernization needs from both the United States and the Soviet Union.

The Soviet leaders, in their dual strategic response since mid-1984—resuming the nuclear arms talks with Washington and accelerating the momentum of the détente course with Beijing—seem to be following the Chinese logic in their own way. A Sino-Soviet détente radiating from within the superpower triad will have several important effects. In the first place, the most immediate, foreseeable outcome is the return of a more even-keeled mode of diplomacy in the Sino-American and the Sino-Soviet relationships. There will be neither the same euphoria in Sino-United States relations nor the same strident feuds between Beijing and Moscow. This is not going to be as disastrous as it may sound for the United States. The much-touted Sino-American alliance was only a United States game plan, to which Beijing was probably never more than nominally receptive for fear of Soviet reactions.

The disappearance of the “China card” would free Washington from certain restrictions inherent in the card playing. For example, the United States would be under less constraint in dealing with Beijing on issues that have divided them, like the Middle East, southern Africa, and Central America. On the other hand, the United States would be able to carry on an even-keeled relationship with China without provoking fearful resentments from Moscow, once normal channels between Moscow and Beijing are restored.

Second, normalization between the two Communist countries may bring stability to the larger international system, beyond the strategic superpower triad. Japan, for example, might be a beneficiary. If tensions with the Soviet Union were reduced, China would be able to devote less attention to its arms building and could concentrate more on its own economic development. That would mean more business for Japan.¹⁷ Similar auspicious effects would extend to the Korean peninsula. With normal relations with Moscow, China would no longer find its policy options mortgaged to the whims of the North Koreans, because the latter would no longer have a credible Soviet card. The Soviets would not have to worry so much about Pyongyang being too closely aligned with Beijing at their expense.

North Korea, on the other hand, would be able to maintain friendly relations with both its “big brothers.” With respect to Beijing and Moscow, it would be able to play a role comparable to the role China is now playing vis-à-vis Washington and Moscow in the strategic triad. When North Korea can no longer “blackmail” the Chinese with a Soviet card, the chances of a solution to the Korean peninsula question through negotiations rather than war will be much greater. That would be good news for South Korea, the United States and Japan.

¹⁷George O. Totten, III, “Implications of Sino-Japanese Relations for the Future of the U.S.-Japan Nexus,” in Hsiung, *Beyond China's Independent Foreign Policy*, pp. 76-79.

In Indochina, too, the same auspicious rippling effects would be felt. A Sino-Soviet understanding holds the remote possibility of a solution to the Kampuchean (Cambodian) question. With prior commitments between Moscow and Beijing, the likelihood would increase that the Chinese would cut off support for the Khmer resistance, in exchange for the withdrawal of Vietnamese forces in Kampuchea. There would be more of a chance to broaden the Kampuchea regime—now dominated by the Hanoi-installed Heng Samrin—to include some representation from the ranks of Prime Minister Son Sann and Prince Norodom Sihanouk's supporters.

If such a solution arrived, Moscow would no longer have to finance Hanoi's costly operations, estimated at \$5,000,000 a day. China would no longer have to combat what it calls Hanoi's regional hegemonism and would no longer shoulder the burden of sustaining the insurgents in the Kampuchean conflict. Vietnam, too, would find the outcome helpful. A coalition government in Kampuchea acceptable to Hanoi could come about only if prior guarantees are worked out with and between Beijing and Moscow. When the Kampuchean millstone is lifted from Hanoi's neck, the proud Vietnamese may begin to hope that they can reduce their subservient dependence on their Soviet patron. To help lift themselves from their dismal economy sapped by the Kampuchean war, they could become recipients of aid from a wide consortium of donors, as has been suggested by the ASEAN nations (Thailand, Philippines, Indonesia, Malaysia, Singapore, and Brunei).

These suggestions are only indicative of the kind of gain-and-loss recalculations that will be thrust upon decisionmakers in the wake of a Sino-Soviet normalization. There is no telling how long the détente process is going to take. There will probably be no spectaculars like President Richard Nixon's visit to China in 1972. The Sino-Soviet disputes have long roots, and neither country is given to “quick fixes.” Even when relations between the two Communist giants are normalized, there may be a long interregnum before some of the auspicious radiating effects are felt, especially in Indochina. There may also be unforeseen variables.

The thought of improved relations between the two giant Communist nations should not lead to panic. In the first place, there will be no return to the Sino-Soviet honeymoon of the 1950's. In addition, card-playing in the strategic triad in the 1980's does not have to be as negative as it was in the 1970's. A Sino-Soviet détente will bring stability to the triad, with much wider effects likely to prove healthier than the old rift. The next question is: Will the United States under President Ronald Reagan also understand the virtues of a *ménage à trois*? ■

James C. Hsiung's latest book is: *Beyond China's Independent Foreign Policy* (New York: Praeger, 1985). He is working on a volume on the Sino-U.S.-Soviet triad as a three-person game.

"It is important that every available channel be used to signal to Moscow that the United States is ready and willing to play a constructive role should Moscow decide to withdraw from Afghanistan."

The Soviet Dilemma in Afghanistan

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ALMOST six years have passed since the Soviet Union's invasion of Afghanistan. The Soviet military probably expected to defeat the Afghans easily and establish a servile Afghan regime. Clearly these expectations have proven premature; the Soviets have already fought longer against the Afghans than they did against the Germans in World War II, and there is no end in sight. More than 100,000 Soviet soldiers are fighting in Afghanistan. The military costs of the war have been greater than Moscow anticipated. Although it is difficult to obtain reliable data, more than 25,000 Soviet soldiers have apparently lost their lives in the war. The Soviet military image has been tarnished and Soviet efforts to build a reliable Afghan army in order to turn the war into an Afghan-Afghan war have not succeeded.

The political costs of the war have also been larger than Moscow anticipated. Moscow is perceived internationally as an imperial power in Afghanistan. Within the Soviet Union there are signs that the war is not popularly supported.

Nonetheless, Moscow has been preparing for a protracted war. Soviet leaders have tried to strengthen security institutions to decrease direct Soviet participation in the war and reduce Soviet costs. The Soviet-supported Kabul regime has tried to expand the size of its armed forces and improve their efficiency. The conscription laws have been changed several times, extending the duration of service and reducing the draft age. Draconian measures like press gangs and the rounding up of young men off the street have been used. Even with these measures, the size of the armed forces has not increased significantly and has remained around 40,000 for the past several years.

The performance record of the Afghan armed forces under Soviet control remains extremely poor. Within the military units, there have been many defections, insurrections and cases of collaboration with the resistance forces. The Soviets have been so unhappy with the performance of the Afghan army that they have increased their own role and control.

Moscow has had more success in the expansion and use of two other security institutions: the state police

(KHAD) and rural militias, which have grown significantly since the invasion. During the era of Soviet President Yuri Andropov, the expansion of KHAD was a major component of Moscow's Afghanistan policy. KHAD assassinated resistance leaders and employed both terror and financial rewards to deter Afghan cooperation with the partisans. The use of rural militias has also had some successes. If they keep resistance forces out of their areas, local leaders in rural Afghanistan are allowed to keep their own weapons; they even receive arms, money and food from the Soviets and the Kabul government. Kabul promises not to interfere in these areas. This has made rural militias an attractive option for local leaders. However, these militias have not been very effective, nor have they been reliable—many militia leaders have joined the resistance after working with the Kabul regime.

Military pressures on the Soviet Union have increased, forcing Soviet leaders to adopt new military tactics. One new element has been the increased use of special forces. The war has also been brought closer to Pakistan to try to limit supplies to the partisans and resistance infiltration, and to intimidate Pakistan. Soviet and Kabul military overflights of Pakistani airspace and attacks against Pakistani territory increased significantly in 1985. Inside Afghanistan since the spring of 1984, Soviet leaders have intensified their efforts, with strong offensives against resistance strongholds and major retribution raids against civilians in Laghman, Logar, Herat and areas near Kabul.

The intensified military effort has been accompanied by a political strategy aimed at the Sovietization of Afghanistan and greater domestic acceptability for the Soviet-installed regime. Afghanistan's Communist party has been expanded. At the time of the 1978 coup, there were fewer than 5,000 party members. Today, Soviet and Afghan government sources claim more than 100,000.¹ Western sources estimate the number of card holders at 30,000 to 60,000.² Many new members accepted party membership for practical reasons: to secure government jobs, admission to the university, and scholarships to study abroad, and to avoid problems with the Soviet and Kabul regimes. Most party members would probably abandon the party if Soviet forces finally left the country.

To gain more support among the Afghan people the

¹Stepanov, "Afghanistan on the Path of Revolutionary Change," *International Affairs*, no. 5 (May, 1984).

²E. Girardet, "Russia's War in Afghanistan," *Central Asian Survey*, vol. 2, no. 1 (July, 1983), p. 94.

Kabul government has tried to encourage popular participation in other Communist-dominated institutions like the National Fatherland Front, the Confederation of Afghan Trade Unions and the Democratic Youth Organization. Despite these efforts, large segments of the Afghan population believe that the regime lacks legitimacy.

Having failed to gain popular acceptance, the government of President Babrak Karmal has tried to claim legitimacy by associating itself with traditional Afghan institutions. An important example of this was the meeting of the Grand Assembly, the Loya Jirga, in 1985. This is a traditional gathering of representatives from all major Afghan ethnic and tribal groupings. However, most genuine representatives did not participate in the 1985 Assembly. But as a propaganda exercise it was not entirely ineffective.

Other short-term measures to gain greater support for the regime in Kabul have had very mixed results. Harder to evaluate are the longer-term programs for Sovietization, including Moscow's education strategy. Soviet domination of the official education institutions has increased dramatically. Many Afghan students, particularly younger ones, have been sent to the Soviet Union; there may be 20,000 Afghans studying in East bloc countries. Soviet leaders seem to prefer orphans, who are sent to the Soviet Union for many years of education. The Soviet emphasis on young children and those without immediate family ties indicates Moscow's frustration with more "mature" Afghans, even those who have declared themselves to be loyal pro-Soviet Marxist-Leninists.

Moscow has also increased its hold on the Afghan economy. More than 65 percent of Afghan trade is with the Soviet Union and other East bloc countries. Soviet leaders have increased their exploitation of Afghan natural resources, tripling their natural gas imports at prices below the international rate. The Afghans do not even know how much gas they export to the Soviet Union, because the gas meters recording the amount are located on the Soviet side of the border.

At the international level, Moscow hopes that the world will forget about Afghanistan and that friends of the resistance will abandon it. The Soviet Union was probably surprised by the intensity of international reaction to the invasion. Soviet leaders have tried to reduce the political costs of the war by trying to isolate Afghanistan and have tried to keep the war secret by making press coverage of the war difficult. Journalists accompanying resistance forces have been threatened. Moscow has used its own leverage with friendly countries to oppose or weaken resolutions in international forums condemning its occupation of Afghanistan. It has used its own propaganda to persuade the world that it was invited to Afghanistan; that the Afghan crisis is caused by outside interference, i.e., outside support for resistance against the Soviet occupation; that the Afghan partisans are agents of American, Pakistani, Chinese and Israeli intelligence; and that the conflict would be ended if this

"outside interference" stopped. Moscow has also used its propaganda machinery to cajole and threaten Pakistan, which has played a key role in efforts to oppose Soviet occupation.

Moscow's international efforts have had mixed results. Many countries, including some friendly to the resistance, have adopted Soviet terminology in discussing Afghan developments. For example, the media in the United States and other countries refer to the resistance fighters as rebels, implying that they are fighting against legitimate authority. Some world leaders, like Prime Minister Rajiv Gandhi of India, have repeated the Soviet assertion that the Soviet Union was invited into Afghanistan.

Moscow has also succeeded in preventing the Afghan issue from affecting bilateral relations with several countries. Almost all the sanctions imposed against Moscow because of Afghanistan by countries like the United States have been removed. Soviet threats against international journalists have led some of them to stop traveling inside Afghanistan. Soviet allies, not surprisingly, have supported Moscow on the Afghan issue. The Soviet-imposed regime occupies the Afghan government seat in all international forums except the Islamic Conference, from which it was dismissed. The Kabul regime participated in the thirtieth anniversary of the Bandung conference; it is an active member of the Nonaligned Movement, and it participates in all United Nations (UN) bodies. The Karmal regime's participation in the organizations that (at least numerically) are dominated by countries who won independence from colonial powers is paradoxical. And Afghan participation reinforces the Soviet belief that the world will accept the regime that it has installed in Afghanistan.

Despite some favorable developments, Afghanistan remains a major political problem for the Soviets. Soviet officials face hostile questions on Afghanistan even from friendly countries. Support groups for the Afghan resistance have emerged in many countries and Soviet behavior in Afghanistan has been documented in several reports—the most important of which is the Felix Ermacora Report of the United Nations Human Rights Commission. Rather than declining, interest in Afghanistan has in fact increased in many countries, including the United States. There are some ambiguous but nevertheless disturbing signs from the Soviet viewpoint that India's Gandhi might take a more independent stand on the Afghan issue.

Even at the government level, the Soviet occupation has been condemned at the United Nations by larger majorities each year. Developments in Pakistan have probably been a major surprise for the Soviet Union. Soviet leaders probably did not anticipate that Pakistan could stand firm for so long.

In part to reduce the political costs of the occupation, the Soviet Union has allowed the Karmal regime to participate in the United Nations-sponsored indirect

talks with the Pakistanis. These talks are an attempt to indicate to the world, and perhaps to the Soviet citizens, that Moscow is interested in a political settlement that would end the war. Moscow has also been hoping to use these talks to gain legitimacy for the Soviet-installed regime. Both the Karmal government and the Pakistanis have their own reasons for participating. Although five rounds have been held so far, the talks have not succeeded because the Afghan and the Soviet governments have refused to accept a binding linkage between support for the resistance (which the Soviets call "outside interference") and Soviet troop withdrawal. Moscow insists that the issue of withdrawal is a matter between it and the Kabul regime. Since the Soviet military presence is the crux of the difficulty for those opposing the Soviet occupation, the Soviet refusal to enter into a binding international agreement on withdrawal is unacceptable to the other parties.

General Secretary Mikhail Gorbachev must face his country's entanglement in Afghanistan. He could continue the current policy, which has support in the Soviet leadership. Soviet leaders may argue that the policy will work in the long run, even though they may not be able to provide a specific time frame. They can point to some positive developments, like the dropping of bilateral sanctions, or the success of specific military operations inside Afghanistan, and they may believe that more Soviet-trained Afghans will be more effective. They may also argue that specific military pressure on the infiltration routes, for example, will produce major changes—and they may argue that Pakistan's domestic instability will intensify, leading to a change in its Afghan policy.

The fear that the current Soviet approach may entangle the Soviets in a protracted war may lead Gorbachev to look at other policies. However, there is no indication that he is seriously considering alternative actions and he is unlikely to change Soviet policies until he has consolidated his position.

POLITICAL SETTLEMENT

A political settlement is one alternative to the current approach. Guaranteeing Afghanistan's neutrality might insure that it does not become a threat to the southern Soviet Union. At times, Moscow has claimed that had it not invaded Afghanistan, the country might have become an American military base. Moscow may even claim that it has achieved its goal. This might appear credible to its domestic audience and to the satellite states. A political settlement could be achieved through the current (or modified) UN-sponsored negotiations on Afghanistan.

However, accepting a political settlement that insures Soviet military withdrawal and Afghanistan's nonalignment and recognizes the right of the Afghans to determine their own government will be costly to the Soviet Union. A settlement would mean that Moscow has abandoned its objectives in Afghanistan—at a minimum, its hope to establish a pro-Soviet Communist regime there.

THE POSSIBILITY OF ESCALATION

Frustrated over the failure to defeat the resistance and unwilling to give up Soviet war objectives, Gorbachev may decide to escalate dramatically the pressure against the resistance and against Pakistan. Military pressure against the resistance could take the form of significant increases in the number of Soviet forces and the use of more brutal tactics. However, a substantial increase in the present number of Soviet troops (100,000 more) will decisively increase the costs of occupation. The political costs of the occupation may also grow, since almost doubling the troops in Afghanistan will draw new attention to the Afghan war.

At the military level, increased Soviet efforts could lead other nations to escalate support for the resistance. Such support could take the form of military supplies, better and more extensive training, and increased financial aid, thus improving the quality and the number of full-time fighters.

A new and important factor that may expand resistance activities and increase the political costs of the occupation to the Soviet Union is the recent alliance of the principal partisan groups. In the past, the political organization of the Afghan resistance has been much weaker than its military might. The partisans' political weakness has undermined efforts to project the war internationally and has helped the Soviet-installed regime to gain a degree of legitimacy. The resistance recognizes this problem, and an alliance of the principal partisan groups was established in 1985. Increased Soviet military pressure could bring about a dramatic increase in the stature of the alliance internationally. Should this happen, Moscow might have to consider negotiating with resistance leaders.

In another form of escalation, the Soviet Union might increase pressure on Pakistan to force that country to adopt a policy of neutrality. Soviet relations with Pakistan are already tense. While in the past Soviet leaders used both the carrot and the stick approach—providing economic aid and seeking to end Pakistani support for the Afghan resistance, Moscow is indicating that economic cooperation may no longer be feasible because of Pakistan's Afghan policies. To prevent any improvement in Indo-Pakistan relations, Moscow has repeatedly accused Pakistan of masterminding the Sikh problem in India, seeking a nuclear capability against India, and of wanting to change the balance of power in the region against India. Soviet propaganda has become more hostile, especially after a fire in an Afghan resistance camp in Pakistan led to the death of more than 10 Soviet prisoners in early 1985. Direct Soviet pressure on Pakistan in the form of crossborder attacks has also increased. But although there are voices in Pakistan calling for a change in government policy on Afghanistan, Islamabad has stood firm. Soviet pressure on Pakistan has led the United States to speed up the delivery of air defense weapons to Pakistan to bolster that country's air defense along its western

border, and Washington has protested directly to the Soviet Union about Soviet crossborder attacks on Pakistan.

An escalation of Soviet pressure against Pakistan could take several possible forms. First, Moscow might make a greater effort to destabilize Pakistan, although thus far this effort has not been successful. But an active policy of destabilization might undermine Moscow's friends and strengthen President Zia ul-Haq's regime. Nevertheless, Moscow might choose this option.

Second, the Soviet Union might increase direct military pressure by attacking major Pakistani targets—towns, military facilities, or industrial centers. Successful attacks could increase opposition pressure on Zia to come to terms with the Soviet Union. However, such action could increase the pressure on the government of Pakistan to respond and could lead to further American assistance to Pakistan.

Third, major military incursions into Pakistan are a possibility, with the consequent takeover of Pakistani territory. If Moscow were to carry out such operations against Pakistan, substantial logistical preparation would be visible and could be affected by the resistance. Moscow would also need to secure its supply lines, which would be difficult while a major insurgency is under way. It will require a substantial investment of resources for Moscow to overcome these problems enough to carry out a significant territorial expansion into Pakistan. A Soviet attack aimed at holding Pakistani territory would probably lead to a major crisis in American–Soviet relations. Soviet ties with China—which has a long-term friendly relationship with Pakistan—might also be damaged. This option is very risky for the Soviet Union, and it poses a serious threat to Pakistan.

GORBACHEV'S CHOICES

Gorbachev may share the objectives of previous Soviet leaders and he may have some commitment to current pacification tactics in Afghanistan. Accepting a political compromise while he is consolidating his power could open him to the charge that he is timid and weak. On the other hand, a major escalation, especially a major incursion into Pakistan, could leave him vulnerable to the charge that he is an adventurist. Neither development would strengthen his position.

However, once Gorbachev has consolidated his position, the lack of Soviet success in Afghanistan could lead him to consider alternative policies. What he will choose will depend on his perception of the gains and risks associated with each option. An indefinite protracted war will engage significant Soviet resources with negative consequences for Soviet society and polity. Moscow is more capable than open societies of bearing such costs, but its capacity is not infinite.

Gorbachev's choice can be influenced significantly by the Pakistanis, the Iranians, the Chinese and the Americans, among others. Should the Soviet Union win in

Afghanistan, its ability to threaten Iran and Pakistan will increase significantly. Moscow will learn that its expectation that in time other nations will accept its terms is justified.

Coming to terms with the Soviet occupation could serve the short-term interests of the local states, because Soviet pressure against them is likely to decline as a result. However, in the long run, the security of the region will be undermined. Therefore, it serves the best interests of these states and other states with significant interests in the area to prevent a Soviet military victory in Afghanistan. This means that they will have to support the partisans.

Washington and Beijing can make major contributions in this area. The United States can help Pakistan increase its military capabilities along the Afghan border, thus increasing the price that Moscow would have to pay in case it attacks Pakistan. Both China and the United States can indicate to Moscow that they have important stakes in Pakistan's security and that Moscow's use of force there could lead to a major confrontation. One indication that the United States takes Pakistan's security seriously has been the expedited American shipment of sensitive air defense equipment to Pakistan. Gestures like this and a periodic restatement of American interest in Pakistani security are likely to have a sobering effect on Moscow. Such support may make Pakistan a serious area of confrontation between the superpowers.

The Soviet Union, its friends, and some independent analysts have charged at times that Washington prefers the continuation of the war to a political settlement because of propaganda advantages and because the war keeps the Soviet Union entangled in a protracted and bloody conflict. In their 1982 and 1985 bilateral talks on Afghanistan and on many other occasions, the United States indicated to the Soviet Union that Washington will not create obstacles to a Soviet withdrawal and a political settlement of the Afghan dispute. The Soviet Union has not trusted American assurances, perhaps in part because Soviet leaders have not been ready for a settlement and because the charges against the United States serve their own propaganda purposes.

However, it is important that every available channel be used to signal to Moscow that the United States is ready and willing to play a constructive role should Moscow decide to withdraw from Afghanistan and accept a political resolution of the conflict. At present the Soviet Union is not willing to move in this direction. But perhaps one day it will be. ■

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BOOK REVIEWS

ON THE SOVIET UNION

PUTTING UP WITH THE RUSSIANS. By *Edward Crankshaw*. (New York: Viking, 1984. 269 pages, \$17.95.)

This collection of essays and reviews preceded Crankshaw's death earlier this year. The essays range from his earliest observations on Stalin to his admonition of "no tears" over Andropov's early demise. Crankshaw was no dupe: he saw that the Soviet Union's major contribution to political life was epitomized by what he called "Kremlin Man"; the Soviet party member who can admit no wrong by the Soviet Union and who governs only by systematic deception. Still he saw the necessity of dealing with the Soviet Union and not just villifying it. His clearheaded views stand in stark contrast to the Manichaeism that governs the Reagan administration's attitude toward the Soviet Union.

W.W.F.

RETHINKING THE SOVIET EXPERIENCE: POLITICS AND HISTORY SINCE 1917. By *Stephen F. Cohen*. (New York: Oxford University Press, 1985. 222 pages, notes and index, \$17.95.)

Cohen is a respected observer of the Soviet Union. He also counts himself a member of the revisionist school of Sovietologists: those who have broken with the orthodox view of the Soviet Union as a totalitarian behemoth and who argue that political life in the Soviet Union is much more varied and suffers from official dissent and divergent viewpoints (the revisionists do not, however, deny the extensive limits placed on this diversity). The first essay is a strong indictment of the orthodox view and the following essays, which cover Stalinism, the alternatives to Stalinism, and the forces of reform and conservatism in the Soviet Union, are an attempt to test the revisionist view.

W.W.F.

THE HEAVENS AND THE EARTH: A POLITICAL HISTORY OF THE SPACE AGE. By *Walter A. McDougall*. (New York: Basic Books, 1985. 576 pages, notes, appendix and index, \$25.95.)

McDougall's book fills a gap in the history of post-war relations between the Soviet Union and the United States by looking at the space race between the two nations. But this is more than just a narrative history; McDougall also analyzes the domestic debates that surrounded each country's entry into the space age from a larger question: how did this race with its emphasis on a mobilized scientific-military-industrial complex affect the political organization of each country? His discussion of the Soviet Union's space program is based mainly on secondary sources; he con-

cludes that the Soviet Union's political system was ideally suited for the space age because of its structure and because the promises of communism included the lure of technological advancement. His analysis of the rise of the United States space establishment is much more interesting and penetrating; it also contains several lessons for those who are pushing for ballistic missile defense.

W.W.F.

POLITICS AND TECHNOLOGY IN THE SOVIET UNION. By *Bruce Parrott*. (Cambridge: MIT Press, 1985. 428 pages, notes and bibliography, \$10.95 paper.)

This is an excellent analysis and review of the Soviet Union's technological strategy. Parrott focuses on the political debates and strategies that have governed technological innovation in the Soviet Union from Stalin to Brezhnev. He has a deeper understanding of the Soviet Union than McDougall does and he offers a much more detailed analysis of Soviet attitudes toward technology.

W.W.F.

THE USSR IN THIRD WORLD CONFLICTS: SOVIET ARMS AND DIPLOMACY IN LOCAL WARS, 1945-1980. By *Bruce D. Porter*. (New York: Cambridge University Press, 1984. 248 pages, notes and index, \$29.95.)

Has the Soviet Union gained from its third world military actions? Porter analyzes five cases of Soviet intervention in a third world conflict in order to assess Soviet gains. He concludes that while the Soviet Union undeniably gained some influence and military base in the third world, the United States remains "the most influential of the two powers in most countries and regions."

W.W.F.

ALSO RECEIVED

SUPERPOWER GAMES: APPLYING GAME THEORY TO SUPERPOWER CONFLICT. By *Steven J. Brams*. (New Haven: Yale University Press, 1985. 176 pages, notes, bibliography and index, \$22.50, cloth; \$6.95, paper.)

SECTORS OF MUTUAL BENEFIT IN U.S.-SOVIET RELATIONS. Edited by *Nish Jamgotch, Jr.* (Durham, NC: Duke University Press, 1985. 254 pages, notes, appendices, bibliography and index, \$35.00.)

ORIGINS OF THE GREAT PURGES: THE SOVIET COMMUNIST PARTY RECONSIDERED, 1933-1938. By *J. Arch Getty*. (New York: Cambridge University Press, 1985. 276 pages, notes, appendix, bibliographic essay and index, \$34.50.)

ENERGY, ECONOMICS, AND FOREIGN POLICY IN THE SOVIET UNION. By *Ed A. Hewett*. (Washington, D.C.: The Brookings Institution, 1984. 228 pages, notes, and index, \$28.95, cloth; \$10.95, paper.)

SOVIET HEALTH

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Furthermore, the fact that women are taking up smoking in ever-increasing numbers has contributed still further to the crisis in public health. Although estimates vary, it appears that in 1969 only about one out of ten women were smokers; by 1977 the figure had risen to four in ten. (In contrast, Soviet researchers have found that approximately two-thirds of men smoke.)²⁴ If miscarriages, stillbirths, infant mortality and a wide range of early childhood illnesses are, to whatever degree, a consequence of smoking by pregnant women, the rapid increase in smoking among the female half of the population must have been reflected in the deterioration of public health levels in the Soviet Union.

According to most researchers, most men who smoke begin to do so before they reach the age of 19; one source puts the figure at 84.2 percent. For a number of reasons, primarily psychological, women generally begin to smoke 3 to 5 years later than men. There are also perceptible class differences among smokers: pupils at vocational and technical schools usually take up the habit at 16–17 years of age, whereas students at higher educational institutions (*vuzy*) do not begin smoking, on average, until they are 18–21, i.e., precisely while they are enrolled in a university or an institute. Interestingly enough, the course of higher education seems to be accompanied by a steady increase in cigarette smoking. A major survey of students at 13 different *vuzy* found that anywhere from 21 percent to 40 percent of the men in the sample smoked before matriculating; by the time they completed their education, 55–80 percent of them were addicted to tobacco. Among women, the change was even more dramatic, from 2–4 percent among new students to 27–50 percent among those who were able to graduate.²⁵

Still, education seems to be correlated with an ability to avoid the temptation of smoking, rather than with a propensity to light up. A major research project on the educational and socioeconomic determinants of smoking, carried out in the early 1980's in Moscow and the Lithuanian city of Kaunas, revealed that there were fewer smokers among men with higher education than among men who had only elementary or secondary schooling. The highest proportion of smokers in both cities was found among manual workers, the second highest among technicians and service employees; members of the intelligentsia were the least likely of all occupational groups to smoke.²⁶ Since one of the principal thrusts of the recent Soviet educational reform was to reduce the proportion of youngsters going on to higher education while increasing

the number assigned to manual tasks, it is clear that the population groups that are most likely to produce smokers will expand.

GOVERNMENT EFFORTS

To combat the problem of smoking, the Soviet authorities have moved in two directions. On the one hand, they have introduced various propaganda and educational measures; on the other, they have provided medical assistance to anyone who wishes to break the habit. Health warnings on cigarette packs made their first appearance in 1978, bearing the simple inscription, "Smoking is hazardous to your health." But there have been numerous complaints suggesting that the warning is worded too mildly and is placed so inconspicuously that it has only a negligible deterrent effect.

Propaganda made available through films, lectures and "public service" announcements on radio and television has also come in for sharp criticism. As one journalist remarked several years ago, the officials in charge of disseminating antismoking information "often undermine their own case by engaging in oversimplification." Documentary filmmakers, he asserted, like to show "ghastly black lumps out of which tobacco appears to be oozing," or else they focus the audience's attention on other, equally horrible, sights. In this way, the viewer is given the impression that smokers are in constant pain and are in imminent danger of dying. But these messages collide violently with what the typical smoker experiences or sees around him—hardly a prescription for successful propaganda.²⁷

Other proposals in this sphere resemble American proposals. The Ministry of Health has set up a permanent working group to coordinate antismoking efforts; scientific research institutes are trying to develop new ways to treat addiction to tobacco; and the government has banned the advertising of tobacco products and the sale of tobacco to minors.²⁸ In addition, an attempt has been made to reduce the use of low-grade, high-nicotine tobacco, and an ever-increasing proportion of cigarettes produced are of the filtered variety. The Ministry of Culture has promised to limit the number of movies and television programs in which actors smoke "unnecessarily," and officials of the Ministry claim that they are already exerting pressure on performers, directors, and local cultural officials to curb such "excesses."

For many years, smoking has been prohibited or severely curtailed in theaters, concert halls and "houses of culture," as well as on ships, trains and planes. In the late 1970's, officials of all levels of the educational system introduced special programs aimed at persuading students and teachers alike not to smoke. "Medical education centers" have been set up on an experimental basis at a number of schools; teachers, pupils, psychologists and physicians at these centers work together to "break [the children's] bad habits." Films are shown, discussions are held, parents are summoned, and pupils who continue to

²⁴*Literaturnia gazeta*, August 1, 1984, p. 13; *Pravda*, April 7, 1980.

²⁵Katkova, op. cit., pp. 42–43.

²⁶*Terapevticheskii arkhiv*, no. 1 (1983), pp. 57–61.

²⁷*Pravda*, October 16, 1982, p. 6.

²⁸*Teoriia i praktika fizicheskoi kul'tury*, no. 11, 1982, pp. 55–57.

smoke are placed under direct medical supervision. If everything works out according to plan, then "gradually the psychological factors that led to the harmful habit are 'broken down,' and a positive attitude is fashioned."²⁹

Nonetheless, government agencies periodically announce that the struggle against smoking is not being waged with sufficient persistence, and even former Minister of Health Boris Petrovskii could claim only "modest successes in this very important area."³⁰ While few would go as far as the two experts at the Academy of Pedagogical Sciences—who asserted in the early 1980's that smoking is "a special kind of mental illness, rather than merely the gradual accumulation of morbid changes in various organs"—it is clear that the practice is doing untold harm to Soviet citizens.³¹ And one can only conclude that the situation will get worse before it gets better.

CONCLUSION

Increased drinking and smoking, especially among women and young people, have had a devastating impact on the well-being of the Soviet population. They have contributed heavily to the increase in infant mortality, which in turn has led to a rise in overall male mortality and a reduction in male life expectancy. Drinking and smoking among adults have reinforced this trend. To date, the party seems to have been powerless to arrest either the increase in alcohol and tobacco consumption, or the deterioration in public health levels. Law enforcement personnel, doctors, teachers and propagandists are, it would appear, confronted with a Sisyphean task.

Countless Central Committee resolutions and *Pravda* editorials underscore the ineffectiveness of propaganda against smoking or drinking. Frequent price increases have proved equally irrelevant: vodka and, to a lesser degree, tobacco are virtually price-inelastic, for people are willing to pay whatever they must for whatever they "need." Barring a return to Stalinist techniques on the part of the Soviet leadership—an approach which is by no means impossible to imagine—the prospects for improving public health indicators seem bleak indeed. ■

²⁹*Pravda*, November 19, 1982, p. 6.

³⁰*Pravda*, April 15, 1978, p. 3.

³¹A. G. Khripkova and D. V. Kolesov, "Hygiene and Sex Education of General Education School Pupils," *The Soviet Review*, vol. 25, no. 3 (Fall, 1984), p. 20.

SOVIET ECONOMY

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in research and development and graduates far more

¹⁶See for example Amann and Cooper, op. cit., and Joseph S. Berliner, *The Innovation Decision in Soviet Industry* (Cambridge: The MIT Press, 1976).

¹⁷Philip Hanson, *Trade and Technology in Soviet-Western Relations* (New York: Columbia University Press, 1981), pp. 161–184.

¹⁸*Pravda*, August 28, 1983.

¹⁹*Pravda*, April 24, 1985.

²⁰*Pravda*, June 12, 1985.

engineers each year than do Western countries. The reasons for the sluggish performance are aired extensively in the Soviet press and have been investigated in depth by Western scholars.¹⁶ One important reason is the organizational separation of research and development from both prospective producers and users of new technologies. Nearly two decades of efforts to repair this organizational defect have had little positive impact. More important, however, is the fact that Soviet firms feel little pressure from their competitors and their customers to innovate; rather, pressure must come from the administrative bureaucracy, for which technological innovation is only one of many goals. Since enterprise incentives are linked to meeting monthly and annual plans for specified (and often changing) targets, managers are reluctant to jeopardize plan fulfillment by trying something new, because the penalties for failure are severe and the rewards for success are small. Moreover, the pricing system fails to give proper signals and rewards for product innovation and quality improvement.

In a word, firms usually find it both more comfortable and more profitable to stay in a rut. Finally, it should be noted that the systemic barriers to domestic innovation also interfere with speedy and efficient adoption and diffusion of imported technologies, making the payoff much less than it might be. There are exceptions, of course, like the concentrated effort in the late 1960's and early 1970's to build up a modern fertilizer production capability based on a large infusion of Western technology.¹⁷ But in recent years even this showcase project has run into severe problems.

Successive Soviet leaders from Nikita Khrushchev to Gorbachev seem convinced that the solution to the country's economic malaise lies in harnessing the forces of the so-called scientific-technical revolution. In the past 20 years, the government has adopted many decrees dealing with research, development and innovation. The latest is a wide-ranging document promulgated in July, 1983, which, in essence, demands that everyone concerned speed up the development and the introduction of efficient new technologies and products,¹⁸ hardly an effective approach to such a complex issue. In his speech to the party plenum in April, 1985, Gorbachev called for placing at the top of the party's agenda a radical acceleration of scientific-technical progress.¹⁹ He noted that

in the majority of industries, scientific and technical progress is flagging; it is developing basically in an evolutionary manner, primarily by improving existing technology and the partial modernization of machinery and equipment. . . . What we need is revolutionary change, a transfer to fundamentally new technological systems, to the most up-to-date machinery to provide the greatest efficiency.

He reiterated this theme two months later at a special party conference on the subject.²⁰

In its fundamentals, the Soviet economic system today is essentially the system put in place by Stalin in the 1930's for the purpose of establishing socialism, manag-

ing the rapid industrialization of an overwhelmingly agricultural economy and building up a military capability. The system of production managed and directed by government agencies has been highly successful in accomplishing Stalin's objectives. The Soviet Union now has the second largest GNP in the world, a massive modern military establishment, a huge, although obsolescent, capital stock, an educated labor force, and a moderately affluent (by past standards) population. The economy produces over a million products, has millions of prices and possesses several hundred thousand producing units. It also has two large, well-entrenched bureaucracies that participate actively in management of the economy: government agencies and the apparatus Communist party.

The fundamental features of this system that shape the behavior of all economic agents are: the state ownership of productive property; highly centralized, directive and detailed planning of outputs and inputs; administratively set prices and government rationing of raw materials and investment goods; the administration of business firms essentially as units in a bureaucratic hierarchy; and incentive arrangements geared to meeting plan targets of one kind or another.

Soviet leaders have long recognized the unsuitability of this awesome apparatus for managing a modernizing semideveloped economy and, in particular, for coping with the ongoing "scientific-technical revolution." Over the past two decades, successive leadership has sanctioned many measures, mind-boggling in complexity and detail, designed to "strengthen central planning and improve the economic mechanism." Although these measures have introduced many changes in planning procedures, pricing arrangements, organizational forms and incentive schemes, not one has altered any fundamental of the system, while the size of the bureaucracy has grown apace. In 1985, the system-rooted problems remain, and the economy has lost its dynamism, partly for systemic reasons and partly because it has exhausted cheap sources of energy and raw materials. Meanwhile, rival capitalist states are well launched into the electronic age, with radical technological breakthroughs in prospect.

If the Soviet economy is to be modernized to compete in a world of rapid technological change, it needs both a radical reform of the system and a major restructuring of its capital stock. It desperately needs flexibility, economic decentralization, and a smaller bureaucracy. In a word, the economy needs to be marketized. That would require that production decisions be made by individual firms, guided by prices that reflect relative scarcities and utilities and instructed to seek profits. Firms must be allowed to purchase their inputs as they see fit and must be subjected to both domestic and foreign competition. The bureaucracy must be severely pruned and relegated to managing macroeconomic variables in a system that perhaps might be termed "centralized indicative planning."

With due regard for the different political and economic conditions then prevailing, such a modernization of the contemporary Soviet "economic mechanism" would amount essentially to a return to the fundamentals of Lenin's NEP (New Economic Policy), launched in the early 1920's to rescue the economy and polity from a severe crisis. In my view, unless radical steps of this kind are taken, the Soviet Union will not have a "modern economic mechanism" capable eventually of reaping the benefits of the "scientific-technical revolution" that its leaders so much want to see in place. No amount of nibbling away at the edges of the present obsolete system will do the trick.

GORBACHEV'S OPTIONS

In formulating a strategy for dealing with an ailing but not fatally ill economy, Gorbachev can take comfort from the fact that he does not face an imminent economic crisis that threatens the country's political and social stability. Slow growth per se is not a crisis. The economy may be fragile, but production is not about to plummet. Judging from the tenor of his early speeches, Gorbachev gives no signs of favoring system-shattering reforms of the NEP, Hungarian, Chinese or any other variety. Indeed, there is no domestic constituency for such moves. The party rank and file and the state bureaucracy want none of them because they are politically, ideologically and personally threatening.

The populace is strongly averse to major changes in general and radical economic reforms in particular, because such reforms would threaten everyone's carefully nurtured techniques for getting along in the present system and because Russians then would have to work harder, face job insecurity and countenance far wider disparities in incomes. Party, bureaucracy and people alike merely want the existing system to work more effectively and to deliver goods of better quality and variety when and where they are wanted. In sum, what nearly everyone really wants the new leader to do is to find ways to tap the "reserves" that are thought to be ubiquitous in the present *modus operandi*.

Gorbachev's speech to the party plenum in April provided clues to the actions he may take to tap these "reserves," with a view to accelerating the rate of economic growth through improved efficiency. A repeated theme was the need to impose "discipline" and "order—in production and in the services area, in public life and away from work, in each labor unit and in every town and village."²¹ Less than a month later, he launched a major crackdown on alcoholism. He also spoke of the urgent need to "restructure administration and planning," to "extend the rights of enterprises and their independence" to "introduce financial autonomy and on this basis raise the accountability and motivation of labor collectives in the final results of their work," and to "raise the responsibility of republics and local organs" in economic and social-cultural affairs.

²¹*Pravda*, April 24, 1985.

These are familiar themes that suggest a menu of organizational changes and modification of planning and incentive arrangements that carry on the pattern of the past 20 years.²² The details of the latest round of "improvements in the economic mechanism" probably will be provided at the twenty-seventh party congress scheduled for March, 1986. Given its huge drain on labor, investment and hard currency, the agricultural sector could be a leading target for another round of "reforms."

Besides imposing discipline, restructuring organizations and tinkering with the "economic mechanism," Gorbachev could try to improve economic performance and incentives through reallocation of resources, particularly investment. In his speeches in April and June, 1985, he stressed the need for "restructuring" the production and investment mix, specifically, accelerating growth of the machinery industries, to equip factories with modern technology and thus raise efficiency and improve product quality. He also spoke of the need to raise living standards, specifically by implementing the Food Program, upgrading the faltering health care sector, and adopting an integrated consumer goods program that envisages a "substantial" increase in the production of high-quality consumer goods and services. Any alteration of resource allocation priorities will be reflected in the directives for the twelfth five year plan.

If the economy continues to grow slowly, it will be extremely difficult to make major changes, for there are strong imperatives to progress simultaneously in modernizing the defense establishment, raising living standards and maintaining investment growth. Given these imperatives, the investment rate can hardly be raised much above its present high level (one-third of GNP). Unless a way can be found to reduce the enormous investment in agriculture, it will also be hard to bring about any major reallocation of investment.

There is another option that Gorbachev did not stress—to try once again to obtain a massive infusion of state-of-the-art technology from the West. If carefully selected and managed, such a transfer could appreciably upgrade the quality of the capital stock in several key industries and improve product quality. But the impact on industrial growth could hardly be large, given the present huge size of the capital stock. For the long-run payoff to technology transfer to be substantial in an economy as large as that of the Soviet Union, the domestic economy must itself be innovative. Moreover, unless world markets for raw materials and energy change radically, the Soviet Union would have to finance a large-scale technology transfer by borrowing. Up to now, Soviet policymakers have been reluctant to take that path. ■

²²For surveys of these measures see Gertrude E. Schroeder, "The Soviet Economy on a Treadmill of 'Reforms,'" in *Soviet Economy in a Time of Change*, pp. 312–340. Morris Bornstein, "Improving the Soviet Economic Mechanism," *Soviet Studies*, vol. 37, no. 1 (1985), pp. 1–30.

SOVIET AGRICULTURE

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tary of the Soviet Communist party, making him the most powerful individual in the Soviet Union. From 1978 to his elevation to his present position, he was the member of the Politburo of the Central Committee with responsibilities for agriculture. One can hardly imagine a more disastrous agricultural performance than that which occurred while Gorbachev was in charge. Soviet dependence on imports of grain and other farm products has increased; about two-fifths of all Soviet hard currency earnings are now required to import food.

Agricultural production in 1984 was just six percent greater than it was in 1978 when Gorbachev was put in charge. Per capita meat production is now only slightly greater than it was in 1975. Agricultural investment has accounted for a quarter or more of all investment, yet results appear to have been negligible.

During Gorbachev's tenure as agricultural czar there were no daring new initiatives, no significant reforms. The 1982 Food Program was the outcome of almost two years of discussion, in which Gorbachev must have had a major role. Yet that program represented no break with the past, and history will almost certainly reveal that the program had no significant effect upon rural life or farm productivity. Gorbachev must also have been involved in the preparation for the October, 1984, party plenum on agriculture. There was nothing new there, either. The plenum simply reiterated the need for more land reclamation, including irrigation and drainage, a program that was emphasized by Brezhnev in 1965.

According to Soviet figures, the enormous effort that cost 115 billion rubles and increased the area of irrigated and drained land by 16 million hectares was a failure. For an investment of nearly 7,200 rubles per hectare, average output per hectare from such land was just 485 rubles in 1983. Ignoring all costs of maintaining the irrigated and drained land and assuming that it cost nothing to produce the crops—no seed, no fertilizer, no tractor fuel, no labor, no inputs whatsoever—the return on investment would be less than 7 percent.⁹ If production costs were taken into account, the net return on investment could not exceed 2 percent and might be less. Yet such a program was put forward as a major effort worthy of a plenum of the Central Committee.

In spite of Gorbachev's close association with agriculture, it seems unlikely that the radical reforms required to improve agriculture and rural life will be undertaken. ■

⁹I owe this calculation to Karen Brooks.

SOVIET-AMERICAN ARMS CONTROL

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tions, however questionable, of inevitable victory, to war-fighting, to something akin to massive retaliation. Soviet pursuit of conventional flexibility, and "smart" technolo-

gies, Soviet descriptions of nuclear war as suicidal and irrational, and renewed Soviet emphasis on the devastating nature of retaliation against an aggressor's strike, are suggestive. One remembers Washington's refrain 20 or 30 years ago, that Soviet leaders must be educated to see the seriousness of the nuclear horror. Moscow was educated. Is it now its turn to educate us?¹⁴

RENEWAL OF TALKS

Negotiating prospects in 1985 were fraught with uncertainty. President Reagan's accommodating November, 1984, campaign rhetoric, highlighted by his references to Mohandas Gandhi from the United Nations podium, brought Moscow to the bargaining table. Moscow's disenchantment with peace movements and its recoil from the prospect of a stepped-up arms race in space surely influenced its decision to return. But the change in atmospherics tipped the scales. Moscow had adopted the mantle of reason. It might have doubts about American motives, but it could not dismiss Washington's professed willingness to address all outstanding issues without impugning its own motives.

Yet suspicion and distrust ran deep. President Reagan did not withdraw his evil empire epithet. And some Soviet leaders referred back to the Molotov-Ribbentrop pact of 1939: "We heard accommodating words in Berlin, yet two years later five and a half million Wehrmacht troops crossed our border."

On the American side, Paul Nitze may have become the administration's principal adviser, but the core players also included the Defense Department's Richard Perle, who took pride in having scuttled past arms control efforts and who remained viscerally opposed to deals with Moscow. On the other hand, there were those in the Kremlin who reverted to the rhetoric of the late 1930's, calling for a "Dimitrov" strategy, downplaying other ideological differences and concerns, in order to forge the widest possible coalition against a supposedly implacable foe, bent on the very destruction of the Soviet state.

Most American scientists agreed with Moscow's official proposition that Star Wars population defense was a dubious, exorbitantly priced venture, likely to lead to increased uncertainties and decreased security. But weapons systems acquire lives of their own, quite apart from strategic rationale. They acquire bureaucratic constituencies. The arms literature is replete with examples, on both sides, of weaponry that, once passed a certain stage of development, received continuous funding regardless of performance.

There were Americans who wished to pour even more development funds into Star Wars, regardless of its feasibility. They thought that Star Wars and assertive policies elsewhere had forced Moscow to the bargaining table. They felt that perseverance would force further Soviet concessions. On the other hand, the spring, 1985, consen-

sus in Moscow was more fragile than that of 1983. As in the United States, there were indications that Soviet hardliners' acceptance of talks rested on expectations of failure, and on the expectation that this would redound to their advantage.

MEETING IN GENEVA

The January, 1985, meeting was positive in tone, as were the press conferences that launched the first negotiating session. Both sides adopted accommodating postures. But neither party offered a concrete concession to the core concerns of the other. The most important initiatives of the preceding four years, from forward naval designs to Pershings and Star Wars, were American, and to this extent, the ball is in Washington's court. Yet Moscow's larger land missiles, once justified by the need to compensate for inaccuracies, now harbor improved guidance devices and constitute a theoretical threat to hardened land targets (as do American Minuteman 3's, the emerging MX, and the Trident II's). The Pershings were met by a whole range of new Soviet deployments, including more SS-20's. Both sides were eager to spell out what they wanted; neither side was eager to spell out what it might give up. In historical terms, in terms of bargaining strategy, this is unexceptional. What is exceptional is the suggestion that crucial players on one, and probably both sides, are bargaining in less than good faith.

The opening negotiating round ended in acrimony. Soviet General Secretary Mikhail Gorbachev charged that United States refusal to discuss Star Wars violated the January formula calling for combined offensive/defensive talks. Washington policymakers sidestepped the charge in favor of a media-bltz of accusations that Moscow had violated past accords. Moscow's one permitted new missile, the MX-equivalent SS-X-24, was said to be joined by others. Thus, Washington charged that SS-16 mobile missiles at Plesetsk contravened SALT II deployment stipulations, although United States Air Force Chief of Staff General C. A. Gabriel acknowledged that they were not operational and hence not illegal. Washington also charged that the SS-X-25 replacement for the SS-13 exceeded permissible size-increase formulas, despite uncertainties about exact SS-13 specifications.

The Soviet phased-array radar near Krasnoyarsk was called a "battle-management" facility, violating the Anti-Ballistic Missile Treaty's provision that such radars be located on a country's periphery, facing outward. Washington ignored Moscow's offer to allow American inspection upon completion; it ignored the assessment by British intelligence and the United States Central Intelligence Agency that the radar was probably intended for permissible space tracking, and the United States made no mention of the five larger analogous United States radars that, although on the periphery, provide inland coverage. The fact that Krasnoyarsk lay in Chernenko's home district (work for the boys?) also drew no comment.

¹⁴The reversal is of course not total. Moscow deploys new tactical nuclear missiles in Europe. The nuclear option remains.

Moscow's flaunting of missile "pop-up" techniques that make silo reloading possible was condemned. Finally, Moscow was also said to engage in excessive encryption of missile telemetry data.¹⁵

Moscow countered with its own long list of United States violations, from Pershing 2 deployments, said to defy SALT limits, to the whole gamut of SDI/Star Wars projects, described as gross violations of the ABM Treaty, to concealment and disinformation. Moscow asserted that United States charges constituted deliberate misinformation, designed to prepare public opinion for formal renunciation of existing treaties and an American break-out from treaty restrictions. Moscow also noted that uncertainties over treaty compliance would dissipate if the United States ratified SALT II, thus activating its extensive provisions for challenge and compliance verification.¹⁶

The acrimony reflected the first United States chafing against SALT missile limits; the next Trident submarine would necessitate the dismantling of an older Polaris boat. Moscow reached that point earlier, because of its lower warhead-to-missile ratio, and had dismantled older vessels. In Washington, however, the Defense Department, led by Richard Perle, openly advocated a contrary course. It was unsuccessful. But the President's June 10, 1985, announcement that SALT strictures would be adhered to, repeated claims of Soviet cheating and declared that continued American compliance depended on Soviet behavior. The conditional nature of the President's commitment and the prospect of additional Tridents rekindling the debate led Moscow to assert that Washington was "crawling out of the treaty," discarding its provisions one by one.

The immediate need is to reverse or at least contain the momentum that brought Pershings within minutes of Soviet command and control centers and Soviet submarines within minutes of American nuclear buttons. An equal priority is the need to stay strategic defense deployment (but not research). Yet in a sense these are only symptoms of the most crucial issue of all. Intensive efforts on both sides to ensure nuclear force survival and efficacy, even after the destruction of normal command-and-control channels, have produced all-encompassing "wiring" grids that in fact make initiation more likely and escalation more automatic. The greatest danger is not war by man, but war by system.¹⁷ The world needs a breather, time to consider.

The arms negotiations in Geneva may still provide that

¹⁵For a summary of these charges, see "Arms Control and the Russians: Battle of Compliance Heats Up," *The New York Times*, June 7, 1985.

¹⁶See *Pravda*, May 12, 1985.

¹⁷For more information, see Paul Bracken, *The Command and Control of Nuclear Forces* (New Haven: Yale University Press, 1984).

¹⁸Zbigniew Brzezinski, Robert Jastrow and Max Kampelman, "Defense in Space Is Not Star Wars," *The New York Times Magazine*, January 27, 1985.

breather. True, neither side made public concessions. And these and subsequent meetings may still prove to be little more than public relations or propaganda exercises. But careful reading suggests tacit compromise. Moscow insisted that it would not return to the bargaining table without prior dismantling of all Pershing 2's; Washington insisted that Star Wars was nonnegotiable.

In-place Pershings in West Germany were not dismantled; yet it appeared that missiles scheduled for Dutch deployment might not be deployed, and that Belgian cruise and West German Pershing numbers might remain below planned levels. West German deployment was "temporarily" suspended in the summer of 1985 for "technical" reasons, after a missile fuel accident. And even if political tensions are not thus assuaged, the crucial problem of military jitters may have been addressed, a reflection, perhaps, of Nitzze's influence. Pershing warheads are now stored off, and at observable distance from, the missiles. This practice makes the Pershings more vulnerable, but assures Moscow of added warning time. The choice of priority reflects the voice of reason.

Star Wars has not been officially derailed. But American insistence now focuses on continued research rather than deployment, and on the narrower goal of counterforce protection, rather than grander visions of population protection.¹⁸ It is recognized that what was originally designed to protect people, not missiles, cannot, for the foreseeable future, protect people against superpower penetration options, but might protect missiles. In truth, the system designed to end the "obscurity" of Mutual Assured Destruction in fact embeds and perpetuates MAD. Perhaps for this reason, Soviet spokesmen have unofficially begun to accept and appreciate the continuation of Star Wars efforts.

The Soviet response has changed. Moscow insisted through 1984, that although it was convinced of its probable futility, it would feel obliged to counter American deployments with analogous systems of its own, whatever the cost. Soviet defiance is now less Pavlovian. Soviet officials suggest that Moscow may instead concentrate, at least initially, on cheaper countermeasures against ambitious or overambitious American designs, while proceeding at a measured pace with its own defense objectives.

There is still room for compromise. But the bud of compromise is fragile.

SOVIET MISSILE DEFENSE

(Continued from page 316)

1990's if a vigorous Soviet program were maintained.

This BMD activity is part of a substantial Soviet high energy laser weapons program that includes air defense and possible antisatellite applications. An estimated 10,000 scientists and engineers are investigating a broad range of laser types at over half a dozen major research and development facilities and test ranges.⁹

⁹*Soviet Military Power*, pp. 46-47.

In addition, the Soviets are investigating radiofrequency (RF) and kinetic energy weapons, both part of the American SDI. A vigorous military space program has established and maintained capabilities for high launch rates, space-based sensors, and the communications needed to deploy, command and control the space-based elements of any SDI system.

DOCTRINE FOR STRATEGIC DEFENSES

One is forced to ask why the Soviet Union has pursued these programs so vigorously in view of the tremendously high costs involved and the limited capabilities that have been achieved by individual elements of the ensemble of strategic defenses.

Strategic defenses are, of course, an instrument to be used in the pursuit of Soviet strategic objectives. The latter are largely political in nature: to sustain the regime, to maintain its superpower status, and to expand its influence. The value of military power lies in its contribution to a favorable "correlation of forces" that will enable the Soviet Union to exert its will on the world scene. In this context, an ability to wage nuclear war is essential, though having to do so is to be avoided as long as possible. Soviet leaders are averse to war but determined to make sure that Americans will desire it even less.

These political objectives are accompanied by a military doctrine providing (among other things) guidelines for the conduct of strategic nuclear war. This doctrine is, for the most part, the creation of the military itself. It is, consequently, self-serving; it supports the provision of the weapons the military wants and strategy and tactics that maximize the likelihood of military success. It tends to ignore the broader political, economic, and sociological considerations that affect United States doctrine.

Soviet national security policy thus comprises two domains. One is the province of the political leadership and involves a peace policy to avoid war and limit the threat to the Soviet Union through political means. The other belongs to the military and produces the "military science" or doctrine that will support the preparation to fight and survive a nuclear war. It is the responsibility of the political leaders to preserve peace and that of the military to ensure the ability to punish an aggressor and survive and endure war.¹⁰

It is not surprising, then, that Soviet doctrine takes the possibility of nuclear war seriously.¹¹ The fact that this

doctrine is the product of the military alone and is of less importance to the dominant political leadership provides limited comfort. Should the latter appear to have failed to preserve the peace, military doctrine will chart what follows. Both the political and military elements believe that war is most likely to emerge as the natural outgrowth of an extended crisis—not as a choice between peace and war but as the result of having to cope with the apparent inevitability of war.

In such circumstances, it is critical (according to Soviet thinking) to dominate the initial phase of war, to sow confusion, to interfere with the lines of command and control, to employ surprise in the hope of achieving quick success, and to limit damage to the Soviet Union from United States retaliation to a Soviet preemptive strike.

Even with successful preemption, the U.S.S.R. could not escape all retaliatory damage. But damage could be reduced, and this is the role of strategic defenses. The Soviets seek to fulfill this role by using the counterforce capability of offensive weapons systems in conjunction with air defenses, civil and passive defenses, and ballistic missile defenses. By dominating the initial exchange through preemption when the outbreak of war appears inevitable, strategic defenses need only limit the damage to the Soviet Union caused by forces remaining to the United States after a counterforce strike. Such a mission could significantly reduce the technical requirements imposed on defensive systems. If one cannot buy total defense, one can buy some limitation of damage in circumstances that virtually deny the possibility of escaping unscathed. What might appear useless to the United States with its much more demanding expectations of ballistic missile defense might have significant incremental value in Soviet military eyes. A system that is not fully effective but can be made more effective over time would not be so ridiculous an investment as it might appear to the United States.

Given these strategic defensive foundations, how is the Soviet Union apt to react to SDI? First, SDI is most likely to generate fear and loathing among the Soviets. Second, the high profile that it has been given by the Reagan administration in an effort to build domestic support for the undertaking is apt to energize Soviet efforts to stop the entire initiative before it gets much of a start. Third, it appears likely that the initiative will have little near-term effect on the Soviet military developments or behavior. But it is also possible that the initiative may have important second-order effects involving Soviet military responses that could be disturbing to the United States in the longer term.

It is clear that the Soviets see the initiative as a move by the United States toward the achievement of strategic superiority. Undoubtedly, they are skeptical about the contention that defense dominance represents a satisfactory end-state that will provide stability and a peaceful balance in the military confrontation. Such a final solution is not suitably dialectical. Beyond that, it upsets

¹⁰David Holloway, *The Soviet Union and the Arms Race* (New Haven: Yale University Press, 1983), pp. 29–58.

¹¹Much has been written on Soviet military doctrine. For its particular relationship to BMD, see Garthoff, *Ballistic Missile Defense*; as well as Sidney Graybeal and Daniel Goure, "Soviet Ballistic Missile Defense (BMD) Objectives: Past, Present and Future," in *Ballistic Missile Defense Advanced Technology Center, U.S. Arms Control Objectives and the Implications for Ballistic Missile Defense*, Proceedings of a Symposium at the Center for Science and International Affairs, Harvard University, November 1–2, 1979 (Cambridge: Puritan Press, 1980), pp. 39–90.

current Soviet views of the offense/defense relationship and thus is difficult to accept easily. Indeed, similar doubts have arisen in the United States about the ability of the defense to cope with a dynamic offense.

The Soviets have also indicated a belief that the SDI is associated with the acquisition of a first-strike capability. With the pursuit of total defense through the possession of substantial strategic defenses, the appeal of a first strike becomes more important, because the defense can cope with a substantially reduced retaliatory attack. Clearly, the Soviet military tends to see the American SDI as a threat to its ability to maintain the peace through the possession of an unquestioned deterrent force.

The SDI is in fact doctrinally unsettling and is meant to be so. Quite apart from cynicism about its ultimate merits, the Soviet Union is apt to look at it askance as another case in which the United States is endeavoring to change the rules of the game. This penchant of the United States to develop new concepts of the strategic relationship whenever it runs into trouble with existing rules tends to drive the Soviets wild. And, finally, these changes threaten what the Soviets must see as a generally satisfactory and improving situation for Soviet defense development. The steady accretion of military capability that characterizes the Soviet weapons acquisition process is threatened by discontinuities that might leapfrog investments in forces of limited capability or make them irrelevant.

The threat posed by the Strategic Defense Initiative is the threat of serious competition with an energized United States in a high-technology arena. It is nevertheless a little surprising that the Soviet Union is so concerned about SDI. After all, a Soviet program involving most, if not all, of the technologies under consideration by the United States already exists; it is likely that all SDI elements are present to some degree. And the Soviet regime allows work on these projects without the critical review and the public attention that such projects receive in the United States. Soviet military technologists must believe that "new physical principles," as they are called in the ABM Treaty, hold significant promise for ballistic missile defense since they have expended substantial resources to exploit them themselves.

Nevertheless, it is clear that the Soviets fear United States technology and the possibility of its success. This concern is not surprising. In areas key to SDI, such as the very fast, very voluminous processing of data and the microelectronic foundations on which it is based, the United States has maintained a clear and substantial lead over the Soviet Union; moreover, it is a lead that the Soviets are not reducing. Some of the motivations present in the Soviet decision to accept the ABM Treaty undoubtedly still apply. Soviet leaders may see that their situation would substantially improve if they could rule out the possibility of the United States pulling a trump card out of the ballistic missile defense arena.

Economic considerations are uncertain. There is clear

evidence that the new regime recognizes the need for substantial improvement in the Soviet economic situation. The appeals of reducing defense costs are high and it may well be that the effective application of new physical principles for BMD may become a significant sinkhole for resources that might otherwise be spent to greater effect.

Another factor must be mentioned: Soviet humiliation. The United States has publicly stated its intention to undertake groundbreaking new work in the area of strategic defenses. Most objectionable from the Soviet point of view, the United States has even suggested that, having taken this lead, the United States is prepared to share its largess with those less capable, in particular, with the U.S.S.R., so that a stable strategic relationship can be assured. This patronizing approach is clearly unacceptable to the Soviet Union.

Finally, a key Soviet response to SDI is arms control itself. The high visibility given to SDI, both in initial United States announcements and in Soviet responses, will make it difficult to negotiate quietly on new provisions for dealing with ballistic missile defenses based on new physical principles. The current ABM Treaty calls for such negotiations when the application of new physical principles appears to be near. SDI's high profile has required that it be dealt with in specific programmatic fashion in these discussions at the highest levels.

Why will there be no near-term military responses? The Soviet problem in reacting is that the United States has been so uncertain and erratic in its arms acquisition behavior that responsive programs begun too soon may prove to have been wasted efforts. The American SDI program is speculative and is characterized by technical risk. Whether or not it can be successfully accomplished is uncertain. Moreover, there is enough contention in the United States about the merits of the program to make its staying power uncertain.

The "stickiness" in the Soviet weapons acquisition process also argues against rapid, tailored responses involving new weapons. It is a process that has been magnificent in its persistence, its relentlessness and its continuity. It constitutes a capability to develop and produce weapons and their modifications, year after year, in a steady effort to produce substantial forces. It is a process that makes it difficult, however, to behave flexibly and to change direction quickly.

This does not mean that counters to SDI will not be explored. Many have been identified and discussed in the United States in studies of SDI. These counters are not beyond the technological reach of the Soviet Union though they are not known to have undertaken research on all of them. Certainly the Soviets are not likely to give up ballistic missiles in the face of anything less than a full proven American SDI system or without an attempt to counter it. It is far more likely that efforts will be made to keep them effective even against an increasingly capable strategic defense force.

Finally, a few words must be said about worrisome

second-order effects. American enthusiasm for SDI is sure to strengthen the existing Soviet SDI-like program, which seems to have enjoyed good funding; substantial facilities exist and major programs are apparently under way. Despite this, there has almost certainly been some debate about the efficacy of this effort and the fact that it is using resources at the expense of other military endeavors. The cachet given to SDI by the United States strengthens the hands of those working on directed energy weapons and other approaches to ballistic missile defense. While they may not have the early dramatic successes that might occur in the United States, they will certainly enjoy the momentum of Soviet weapons acquisition programs, and that momentum is likely to carry Soviet efforts a long way.

Furthermore, the damage-limiting approach that has characterized Soviet perceptions of the importance of defense is apt to preserve program viability in circumstances where it could not be maintained in the United States. The demonstration of an ability to make a significant contribution to defense should keep the Soviet program alive, while the demonstration of an inability to do the job completely would probably kill such a program in the United States. The SDI, after all, is an exploration of new approaches to achieving ballistic missile defense and the gradual combination of various levels and layers of defense into an overall system that ultimately may achieve very high levels of defense against a ballistic missile threat. It is a long haul, a technologically uncertain program. The Soviet approach of deploying marginally effective systems allows for the exploration of operational utility without having to achieve it before deployment can occur.

The danger is that the persistence fostered by the Soviet process will ultimately prevail. While the Soviets are likely to persist in this endeavor over many years, the United States is more likely to give up in frustration because a fully effective cost-effective system cannot be achieved. Thus, a Soviet SDI-like force might ultimately emerge without any United States counterpart. Such a situation is not without precedence. In the past, there were many snickers in the United States about Soviet attempts to achieve strategic air defense. Now the Soviets have developed and deployed a wide range of air defenses, including a radar infrastructure to support them that is causing increasing alarm, not only because of its ability to deal with aerodynamic targets but because it might provide as well the basis for a strengthened defense against ballistic missiles.

For its part, the United States has done little about such defenses. Air defenses in the United States have virtually ceased to exist. While the United States may be able to live with this air defense disparity in circumstances that allow our ballistic missile forces to impose unacceptable damage on the Soviet Union, an unmatched Soviet ballistic missile defense system would constitute a substantially more ominous situation. ■

THE SOVIET UNION UNDER GORBACHEV

(Continued from page 308)

dorsement. The debate among specialists and administrators over more fundamental economic reform continues.

POSSIBLE ECONOMIC REFORM

Gorbachev has hinted that a major overhaul of economic machinery is in the works, but he has kept its outlines to himself. One would think that nothing short of this would be consistent with his repeated references to "structural" changes. On July 11 he said that by the end of 1985, the leadership would "work out . . . a more flexible and modern management mechanism" for the economy, but it is unclear from this and other pronouncements whether he intends an across-the-board revamping or a more selective and provisional set of changes based on the Andropov experiment.¹⁵ The imminence of the twenty-seventh party congress, which opens February 25, 1986, probably does not leave sufficient time to attempt a genuine restructuring before it convenes.

One prerequisite of systemic reform of the economy is the retirement of stalwart defenders of the present centralized system. These officials are well-entrenched in the state bureaucracy and they take their cue from Prime Minister Tikhonov and Nikolai K. Baibakov, the 74-year-old functionary who has headed the state planning system since 1965. No serious assault on the status quo can be expected until officials like these are removed and replaced with younger and more open-minded men.

For the time being, Gorbachev seems content to build his own authority, urge the Soviet people to work harder, and manipulate with greater energy the levers of the existing institutions of the Soviet system. His performance to date bears out Andrei Gromyko's observation in March, 1985, that Gorbachev is not a man who sees the world in terms of black and white, but instead recognizes "intermediate colors, intermediate links, and intermediate decisions."¹⁶ And yet, in time, sharper hues may emerge. With Gorbachev's innate ability, rapidly accumulating power, frank diagnosis of Soviet problems, and apparently keen desire to leave his mark on history, it is conceivable that he will eventually attempt basic economic reforms that might improve the lot of the long-suffering Soviet people and make the Soviet Union a more effective adversary of the United States in international politics. Barring health problems, Gorbachev will probably have the time to try. The real question is whether he will have the courage. ■

¹⁵Gorbachev's comment is in *Pravda*, July 12, 1985, p. 1. This same newspaper, in its communiqué on that week's Politburo meeting (July 13, p. 1), said the number of ministries embraced by the Andropov management experiment would be "widened" on January 1, 1986, suggesting something far less than a comprehensive reform.

¹⁶"Rech' tovarishcha A. A. Gromyko," p. 6.

THE MONTH IN REVIEW

A Current History chronology covering the most important events of August, 1985, to provide a day-by-day summary of world affairs.

INTERNATIONAL

Arab League

(See also *Lebanon*)

Aug. 10—The 17th meeting of the League ends; King Hassan II of Morocco, the host of the meeting, says that the League supports the cooperative effort of Jordan and the Palestine Liberation Organization to find a Middle East peace solution.

Iran-Iraq War

Aug. 15—Iraq claims that its warplanes bombed and destroyed Iran's main oil-loading terminal at Kharg Island; there is no independent confirmation of the claim.

Aug. 18—A Belgian oil tanker in the Persian Gulf is hit by a rocket fired by an Iranian plane.

South Pacific Forum

Aug. 6—Australia, New Zealand and 6 other nations that are part of the 13-nation forum sign a treaty declaring the South Pacific a nuclear-free zone; the 5 other members of the group are expected to sign the treaty shortly.

United Nations (UN)

Aug. 2—UN officials report that more food and other emergency aid is reaching the famine-stricken northern Ethiopian provinces; according to the report, more than 75 percent of the 2.3 million inhabitants of the region are receiving food aid.

Aug. 13—The UN announces that its \$4-billion pension fund has divested itself of all holdings in companies doing business with South Africa.

Aug. 27—A UN-sponsored conference to review a 1968 treaty aimed at halting the spread of nuclear weapons opens in Geneva.

AFGHANISTAN

Aug. 20—Guerrilla sources tell Western diplomats in Islamabad, Pakistan, that heavy fighting between guerrillas and Soviet troops is occurring in Paktia Province.

ARGENTINA

Aug. 29—A nationwide strike called by labor unions to protest the government's austerity program fails to gain support from most of the country's industrial workers.

BOLIVIA

Aug. 5—Congress elects Víctor Paz Estenssoro President of Bolivia after neither he nor General Hugo Banzer Suárez achieved a plurality in last month's general elections.

Aug. 31—Tin miners begin a 48-hour strike to protest economic austerity measures imposed by the government to fight inflation.

BRAZIL

Aug. 26—Central Bank President Antonio Carlos Lemgruber and Finance Minister Francisco Dornelles resign to protest the government's expansionist economic policy. The government names Dilson Funaro the new finance minister.

BULGARIA

(See *Turkey*)

CHILE

Aug. 3—President Augusto Pinochet, the head of the military government, appoints General Rodolfo Stange head of the paramilitary police force. General César Mendoza resigned from the position following the implication of 14 police officers in the death of 3 Communists in March, 1985.

Aug. 18—The International Monetary Fund announces that Chile will receive an \$850-million loan over the next 3 years to help it with its austerity program.

Aug. 30—A civilian judge orders 5 military intelligence officers held on charges of kidnapping government opponents; they will be tried by a military court.

EGYPT

Aug. 20—The Egypt's Revolution terrorist group takes responsibility for today's killing of an Israeli envoy in Cairo.

EL SALVADOR

Aug. 20—A Salvadoran court grants the new attorney general's request that the assassination case of Archbishop Oscar Romero be reopened.

Aug. 27—President José Napoleón Duarte announces that 3 leftist guerrillas have been arrested for killing 4 U.S. Marines and 2 U.S. businessmen at a San Salvador café in June.

ETHIOPIA

(See *Intl, UN*)

FRANCE

(See also *New Zealand*)

Aug. 18—President François Mitterrand orders the military to use force if necessary to keep protesters out of French territorial waters during a nuclear test scheduled for September.

Aug. 26—A special investigator releases a report clearing 6 French agents of an attack on a ship used by the Greenpeace environmentalist group; the ship was mined last month in New Zealand and 1 Greenpeace member was killed.

GABON

Aug. 1—Captain Alexandre Mandja Ngoukouta is sentenced to death for plotting to overthrow the government of President Omar Bongo.

GERMANY, EAST

(See *Germany, West*)

GERMANY, WEST

Aug. 23—The government reports that the head of West German counterintelligence has defected to East Germany.

Aug. 25—A secretary in the office of President Richard von Weizsäcker is arrested on charges of spying for East Germany. She is the 5th West German government employee named as a spy this month.

Aug. 29—Chancellor Helmut Kohl retires Heribert Hellenbroich, the head of the Federal Intelligence Service; Hans Georg Wicke takes his place.

GUYANA

Aug. 6—President Linden Forbes Sampson dies; Prime Minister Desmond Hoyte is sworn in to succeed him.

INDIA

Aug. 1—Radical Sikh militants announce that they will protest last month's accord between moderate Sikhs led by Harchand Singh Longowal and Indian Prime Minister Rajiv Gandhi.

Aug. 10—The government announces that it has built an advanced atomic reactor capable of producing weapons-grade nuclear fuel.

Aug. 15—Gandhi announces that the government has reached an accord with Assam state whereby all immigrants who have entered Assam since 1965 are to be disenfranchised and all immigrants who have entered the country since 1971 will be deported.

Aug. 17—The government says that it will allow state elections to be held in Punjab state next month; the federal government has ruled Punjab since October, 1983.

Aug. 20—Harchand Singh Longowal, the moderate Sikh leader, is assassinated by two Sikh militants.

IRAN

(See *Intl, Iran-Iraq War*)

IRAQ

(See *Intl, Iran-Iraq War*)

ISRAEL

(See also *Egypt; Lebanon*)

Aug. 2—The Israeli military announces that Israeli jets bombed the headquarters of the Syrian Nationalist party in the Syrian-controlled Bekaa Valley of Lebanon; 2 militiamen are killed.

Aug. 4—The Cabinet votes 13 to 7 to reinstate administrative detention without trial and to deport people deemed security risks in an attempt to crack down on Arab terrorism.

Aug. 15—Israeli officials meet with U.S. Assistant Secretary of State Richard Murphy to discuss Jordan's recent Middle East peace proposal.

Aug. 18—Brigadier General Yitzhak Mordechai is acquitted of allowing excessive force to be used against 2 Palestinian hijackers last year; the 2 were beaten to death by Israeli army and security personnel under the general's command.

Aug. 28—Military authorities at Atlit Prison release 113 Lebanese and allow them to return to Lebanon; 150 Lebanese are still being held.

ITALY

Aug. 5—The trial of Mehmet Ali Agca and 7 other men accused of conspiring to kill Pope John Paul II reconvenes.

JAPAN

Aug. 13—A Japanese airliner with 524 passengers crashes in central Japan; 520 passengers are killed in the worst air disaster involving a single airliner.

Aug. 26—The Japan Automobile Manufacturers Association says that Japanese production of cars and trucks reached a record high of 1.1 million units last month.

KAMPUCHEA

(See also *Vietnam*)

Aug. 22—Deputy Minister of State Planning Nhim Vanda says that Kampuchea faces a severe rice shortfall if drought does not end in several provinces.

Aug. 31—Son Sann, the head of the Khmer People's National

Liberation Front, says he has given his forces a deadline of 2 years to create a popular uprising in Kampuchea.

KOREA, NORTH

(See *Korea, South*)

KOREA, SOUTH

Aug. 22—South and North Korean representatives meeting at Panmunjom agree to allow about 100 North and South Korean families divided by the Korean War to locate and visit relatives on the other side of the border.

LEBANON

(See also *Israel*)

Aug. 3—Prime Minister Rashid Karami says that Lebanon will boycott next week's Arab League meeting in Morocco because of disunity in the Arab position.

Aug. 5—Three Lebanese Shiite guerrillas and 2 Israeli soldiers are killed when the Lebanese attack an Israeli patrol inside southern Lebanon.

Aug. 10—Christian and Muslim militia shell Beirut; at least 10 people are killed and 47 are wounded.

Aug. 12—Shelling between the rival militias continues; artillery fire in residential areas leaves 16 dead and 75 wounded.

Aug. 14—A car bomb explodes in Christian East Beirut; 12 people are killed and 200 are wounded. No group takes responsibility.

Aug. 17—A car bomb explodes outside a supermarket in Christian East Beirut, killing 50 people and wounding 100. No group takes responsibility.

Aug. 19—A car bomb explodes in Muslim West Beirut; 29 people are killed and 82 are wounded. No group takes responsibility.

Aug. 20—A car bomb explodes in Tripoli, killing 44 people; the Revolutionary Christians of the Cedars claims responsibility for the attack.

Aug. 21—Shelling in residential districts by Christian and Muslim militias kills 42 people.

Aug. 22—The Lebanese Cabinet asks Syria to send a peacekeeping force to stop the fighting between Christian and Muslim militias; 21 more people are killed in militia shelling.

Syrian General Ghazi Ranaan works out a cease-fire between the militias and fighting stops for the 1st time in 11 days.

Aug. 28—Israeli troops raid 3 villages in southern Lebanon; "dozens" of villagers are detained for questioning. The Israeli army says the raids are aimed at stopping guerrilla attacks on Israeli troops.

Aug. 30—Mustafa Kassem Khalife is assassinated in Sidon. Khalife was the secretary of the Palestine Liberation Organization (PLO) in Sidon and a supporter of PLO Chairman Yasir Arafat; he is the 6th pro-Arafat Palestinian to be killed in the last few weeks.

LIBERIA

Aug. 22—Ellen Johnson-Sirleaf, the head of the opposition Liberal Action party, goes on trial for sedition; she was arrested for making a speech in Philadelphia that criticized the military government's expenditures on large public buildings.

LIBYA

(See *Tunisia*)

MADAGASCAR

Aug. 2—The government says that yesterday army troops killed 20 members of a secret kung fu sect in Antananarivo.

MEXICO

- Aug. 2—Police use tear gas to break up a demonstration in Monterey, the capital of Nuevo León; the protesters claim that the government conducted fraudulent elections for the state's governor.
- Aug. 21—Foreign Minister Bernardo Sepúlveda Amor says that Mexico does not support the overthrow of the Nicaraguan government.
- Aug. 26—Angel Gurria, the Treasury Ministry's director general for public credit, says that Mexico will need between \$2 billion and \$3 billion in new loans next year in order to make payments on its \$96-billion foreign debt.

MOROCCO(See *Intl, Arab League*)**NEPAL**

- Aug. 25—The government announces the release of 1,649 people who were detained for questioning after 10 people were killed by bomb blasts in June; 101 people remain in custody.

NEW ZEALAND(See also *France*)

- Aug. 22—New Zealand police announce that 1 of the 2 French citizens arrested for last month's mining of a Greenpeace ship is a captain in the French army.

NICARAGUA(See also *Mexico; U.S., Foreign Policy*)

- Aug. 8—Twenty-nine American peace activists are released by right-wing guerrillas (contras); they were held for 29 hours in a contra camp in Costa Rica.
- Aug. 12—*The New York Times* reports that the contras have received almost \$25 million in private donations from U.S. and foreign sources.
- Aug. 23—Contra political leaders say they will curb human rights violations by their military forces.

NIGERIA

- Aug. 27—Army leaders overthrow the military government of Major General Mohammed Buhari; army chief of staff Major General Ibrahim Babangida takes over the office of President.
- Aug. 29—The military government ends the curfew it imposed August 27 and begins to release political prisoners held by the Buhari government.

PAKISTAN

- Aug. 21—A funeral for the son of overthrown and executed President Zulfikar Ali Bhutto turns into an opposition rally against the military government of General Zia ul-Haq.
- Aug. 29—Benazir Bhutto, the daughter of President Bhutto, is placed under house arrest; the government says she is being detained under martial law restrictions.

PERU

- Aug. 1—The government announces emergency economic measures that include a 12 percent currency devaluation and sharp increases in the price of basic foodstuffs.

PHILIPPINES

- Aug. 12—Opposition leader Raul Daza ends 12 years of self-exile in the U.S. and returns to the Philippines.
- Aug. 21—Nearly 100,000 people take part in demonstrations throughout the Philippines to mark the second anniversary of the assassination of opposition leader Benigno Aquino Jr.

- Aug. 30—In a 10-3 decision, the Supreme Court rules that evidence implicating the chief of staff of the armed forces and 7 other officers in the killing of Aquino is inadmissible as evidence against the officers.

POLAND

- Aug. 30—Lech Walesa, head of the banned trade union Solidarity and winner of the Nobel Peace Prize, announces Solidarity's publication of a 500-page report calling for renewed talks between the government and Solidarity.

SINGAPORE

- Aug. 27—Prime Minister Lee Kuan Yew names Wee Kim Wee President of Singapore; Wee replaces Devan Nair, who resigned 5 months ago.

SOUTH AFRICA(See also *Intl, UN; U.S., Foreign Policy*)

- Aug. 3—In Zwede, about 1,500 blacks defy a government ban on large funerals for those killed in the recent unrest.
- Aug. 5—Sixteen leaders of the United Democratic Front, a non-parliamentary opposition group, go on trial in Pietermaritzburg on charges of treason; the government says the 16 defendants formed an alliance with the outlawed African National Congress (ANC).
- Aug. 10—The Reverend Allan Boesak and 18 other people are arrested for attending a funeral in the black township of Guguletu.
- Aug. 13—Winnie Mandela, the wife of imprisoned ANC head Nelson Mandela, says that government security forces are responsible for the fire that destroyed her home this morning.
- Aug. 15—President P. W. Botha tells an audience of whites in Durban city hall that he will not grant political concessions to South Africa's black majority that would allow them to participate in the present political system.
- Aug. 16—Responding to Botha's speech, Nobel Peace Prize winner Bishop Desmond Tutu says that South Africa is "on the brink of catastrophe."
- Aug. 17—Authorities announce that they detained 152 people today under the emergency decree; 938 people are now being held. Two blacks are killed by police in two black townships.
- Aug. 23—Six black protesters are killed by police in Soweto township; 500 black schoolchildren who boycotted classes in the township are arrested.
- Aug. 24—Security forces detain 27 opposition figures.
- Fighting breaks out between Zulu tribal members and other blacks near Durban; Zulu Chief Gatsha Buthelezi calls for an end to the fighting.
- Aug. 25—A poll published in today's issue of *The Sunday Times* (London) shows that 77 percent of all blacks in South Africa favor economic sanctions against South Africa; 21 percent oppose sanctions.
- Aug. 27—Reverend Boesak is detained by police, the day before he was to lead a march demanding the release of Nelson Mandela.
- The government suspends trading at the South African stock exchange until September 2 in attempt to stop the outflow of capital from the country. In international financial markets, the rand trades at its lowest level ever.
- Aug. 28—In Cape Town, police break up a demonstration by thousands of blacks; Indians and Coloreds after a march demanding the release of Mandela is banned; 4 protesters are killed by police.
- Aug. 29—The Association of Chambers of Commerce of South Africa, the National African Chamber of Commerce and Industry, the South African Federated Chamber of Industries, and the Urban Foundation warn the government that economic problems will continue and intensify unless black

are accommodated in the South African political system.
 Aug. 30—Twenty-eight people have been killed in 3 days of unrest near Cape Town.

Gerhard de Kock, the governor of the central bank, arrives in New York City for talks with Western bankers on maintaining credit for South Africa.

SPAIN

Aug. 3—A policeman is killed by a bomb planted by Basque separatists.

Limited abortions become legal in Spain; the Spanish Roman Catholic Church warns Catholics that if they cooperate "physically or morally" with the law, they will be "automatically excommunicated."

SRI LANKA

Aug. 17—Leaders of the Eelam National Liberation Front, an alliance of 4 Tamil guerrilla groups, walk out of peace talks with the government; it is reported that army troops killed 100 civilians yesterday after a guerrilla land mine killed 22 people in the town of Vavuniya.

SYRIA

(See *Lebanon*)

TUNISIA

Aug. 21—The government expels 30 more Libyan diplomats; this brings to 283 the number of Libyans expelled in the last 2 days. The expulsions follow Libya's recent expulsion of more than 21,000 Tunisian workers.

Aug. 22—The government puts its armed forces on alert because it believes Libya plans to use military force to stop what Libya calls an anti-Libyan press campaign.

TURKEY

Aug. 4—Government officials claim that Bulgarian authorities have killed over 1,000 ethnic Turks in a Bulgarian campaign to force the Turks to adopt Bulgarian surnames.

UGANDA

Aug. 5—Paul Ssemogerere is named minister of internal affairs by the new military government of Brigadier Bazilio Olara Okello. Looting and violence have ended.

Aug. 10—The government releases more than 1,000 political prisoners who had been held under President Milton Obote's regime.

Okello announces that the country's largest guerrilla group has agreed to hold peace talks with the government.

Aug. 25—State radio announces that Prime Minister Paulo Muwanga has been dismissed and has been replaced by former Finance Minister Abraham Waligo.

U.S.S.R.

(See also *U.S., Foreign Policy*)

Aug. 5—Western diplomats in Paris report that the Soviet Union has agreed to open 2 of its nuclear reactors to international inspection later this month.

Aug. 13—General Secretary Mikhail Gorbachev denies a U.S. charge that the Soviet Union completed a nuclear weapons testing cycle just before it called for a 6-month moratorium on nuclear testing.

Aug. 22—The official press agency Tass says that the Soviet Union has not used a chemical powder to track the movements of U.S. embassy personnel and other Americans in Moscow.

Aug. 26—The government raises the price of liquor, beer, and champagne sharply as part of its alcohol-abuse crackdown.

UNITED KINGDOM

Great Britain

Aug. 8—Radio and television news broadcasts throughout the United Kingdom are suspended for 24 hours after journalists walk out to protest a British Broadcasting Company (BBC) decision not to broadcast a controversial program on Northern Ireland. The BBC subsequently reverses its decision.

Aug. 23—The government reports that Britain suffered its largest trade deficit in 10 years last year.

Northern Ireland

Aug. 10—Catholic youths throw rocks and gasoline bombs at British troops after Protestants are allowed to march through Catholic areas of Londonderry in an annual parade.

UNITED STATES

Administration

Aug. 5—At a White House news conference, President Ronald Reagan says he intends to pressure Congress to act on his domestic priorities, including his federal tax reform program.

Aug. 16—Transportation Secretary Elizabeth Dole makes public the report of her 3-member Safety Review Task Force, which recommends improvements to increase air travel safety; Dole orders the recommendations implemented.

Aug. 25—The Justice Department reports that 21 criminals were executed in the U.S. during 1984 and that the number of individuals held on death row increased 16 percent, to 1,405, by the end of 1984.

Aug. 28—The Federal Aviation Administration (FAA) orders airlines to inspect Pratt & Whitney engines on over 1,000 planes for possible defects.

Aug. 29—In a message to Congress, President Reagan recommends that more than 2 million civil servants not receive pay increases in fiscal 1986; in its budget resolution, Congress called for a freeze on federal salaries in 1986.

Aug. 31—President Reagan says that he will veto any measures that he regards as protectionist legislation. On August 28, he refused to extend protection for the nation's shoe industry.

Economy

Aug. 2—The Labor Department reports that for the 6th straight month the nation's unemployment rate remained at 7.2 percent in July.

Aug. 9—The Congressional Budget Office reports that its estimates show higher-than-projected budget deficits: \$175 billion in fiscal 1986, \$163 billion in 1987 and \$143 billion in 1988.

Aug. 12—The Agriculture Department reports that it expects the U.S. corn crop to rise 8 percent to 8.27 billion bushels and the soybean crop to increase 5 percent to 1.96 billion bushels in 1985.

The Labor Department reports that its producer price index rose 0.3 percent in July.

Aug. 20—The Commerce Department reports that the nation's gross national product (GNP) grew at an annual rate of 2 percent in the 2d quarter of 1985.

Aug. 22—The Labor Department reports that its consumer price index rose 0.2 percent in July.

Aug. 27—The Census Bureau reports that the number of American families living under the national poverty level declined to 14.4 percent in 1984; the poverty line for a family of 4 was established at \$10,609.

Aug. 30—The Commerce Department reports that its index of leading economic indicators rose 0.4 percent in July.

The Commerce Department reports that the nation's foreign trade deficit was \$10.5 billion in July.

Foreign Policy

(See also *El Salvador; Nicaragua; U.S.S.R.; Vietnam*)

Aug. 5—President Reagan says that his policy of "constructive engagement" toward South Africa is working and that he does not intend to change it.

Aug. 7—According to White House sources and *The New York Times*, the contras (rebels) in Nicaragua are receiving direct military and fund-raising advice from an official of the National Security Council.

Aug. 11—White House spokesman Larry Speakes reports that the format and some agenda items have been established for President Reagan's November meeting with Soviet General Secretary Mikhail Gorbachev in Geneva.

Aug. 12—As some 5,500 protesters march in Washington, D.C., against South Africa's apartheid policies, the White House and the State Department issue a statement calling on South Africa to make "bold decisions" to end racial violence and to give justice to South Africa's black population.

Aug. 14—White House spokesman Larry Speakes calls Gorbachev's call for a halt in nuclear testing a ploy, because the Soviet Union finished and tested "an entire generation of new missiles" before calling for a ban.

Aug. 15—National Security Adviser Robert McFarlane says that South African President P.W. Botha has made "an important statement" in his latest speech about South Africa and that the U.S. hopes that this will "advance the end of apartheid."

Aug. 18—McFarlane says that blacks and whites in South Africa are "looking into an abyss of massive violence."

Aug. 21—State Department spokesman Charles Redman reports that the U.S. has protested to the Soviet Union over the Soviet use of a powdery chemical substance used to track the movements of Americans in Moscow.

Aug. 22—Speaking at a fund-raising dinner for California Republicans, President Reagan defends his Strategic Defense Initiative (SDI) as a "way out of our nuclear dilemma. . . ."

Aug. 23—Former director of the Central Intelligence Agency Stansfield Turner doubts that the Soviet Union uses a tracking powder and says that he was never told of the powder while he was head of the CIA.

Aug. 24—President Reagan says that in meeting with Soviet General Secretary Gorbachev he hopes to remove "hostilities" and "suspicions" between the U.S. and the U.S.S.R.

Aug. 25—Agriculture Secretary John Block arrives on a week-long trip to the Soviet Union to explore the possibility of improving ties between the two countries.

Aug. 26—Speaking from his California ranch, President Reagan says that segregation in South Africa is easing and that South African President Botha is heading a "reformist administration."

Aug. 28—Assistant Secretary of State for African Affairs Chester Crocker denounces South Africa for its use of force to halt a protest march of black students; he calls the changes in South Africa "not adequate."

Aug. 29—The State Department calls on South Africa to commit itself to ending apartheid, talking and negotiating, and "not jailing and beating and bombing and burning" South Africa's black population.

Aug. 30—The State Department says that the U.S. considers the South African government's release of Nelson Mandela, a leader of the outlawed African National Congress, crucial for promoting "dialogue between South Africans of all races."

President Reagan announces that he has set up a special

office to supervise the \$27 million in U.S. "humanitarian" aid approved by Congress for the Nicaraguan rebels.

Labor and Industry

Aug. 14—Members of the International Brotherhood of Teamsters and the National Automobile Transporters Labor Division agree on a tentative contract that will end the 19-day strike by 21,000 haulers belonging to the Teamsters union.

Aug. 21—The American Telephone and Telegraph Company announces plans to eliminate 24,000 jobs at its information systems division over the next year.

Aug. 22—The Ford Motor Company says that it plans to eliminate 10,000 white collar jobs over the next 5 years.

Aug. 27—The Treasury Department fines the Crocker National Bank of San Francisco \$2.25 million for failing to report cash transactions totaling \$3.9 billion over the last 4 years.

Legislation

Aug. 1—The House votes 380 to 48 to support a bill calling for economic sanctions against South Africa; the Senate delays action until September because of the threat of a filibuster.

The House votes 309 to 119 and the Senate votes 67 to 32 to approve a budget resolution for fiscal 1986; the plan calls for deficit reductions of \$55.5 billion for fiscal 1986 and 1987 and the spending of \$967.6 billion in fiscal 1986, with a deficit of \$171.90 billion.

Congress adjourns for vacation until September.

Military

Aug. 20—White House spokesman Larry Speakes announces that the U.S. will test an antisatellite (ASAT) weapon; key members of Congress have been notified of the impending test as required by 1983 legislation that authorized 3 tests of the ASAT against an object in space.

Aug. 27—Defense Secretary Caspar Weinberger announces that the Defense Department will not purchase any more Sergeant York anti-aircraft guns from Ford Aerospace and Communications Corporation because of their poor performance; the Defense Department has spent \$1.8 billion on development and manufacture of the weapon since 1978 and 65 of the planned 618 guns have been delivered.

Politics

Aug. 19—Senator Paul Laxalt (R., Nev.) announces that he will not seek reelection when his term expires in 1986; Laxalt is one of President Reagan's close personal friends and general chairman of the Republican party.

Science and Space

Aug. 6—The space shuttle *Challenger* returns after a successful 8-day space voyage; the ship lost the use of one of its three engines shortly after liftoff.

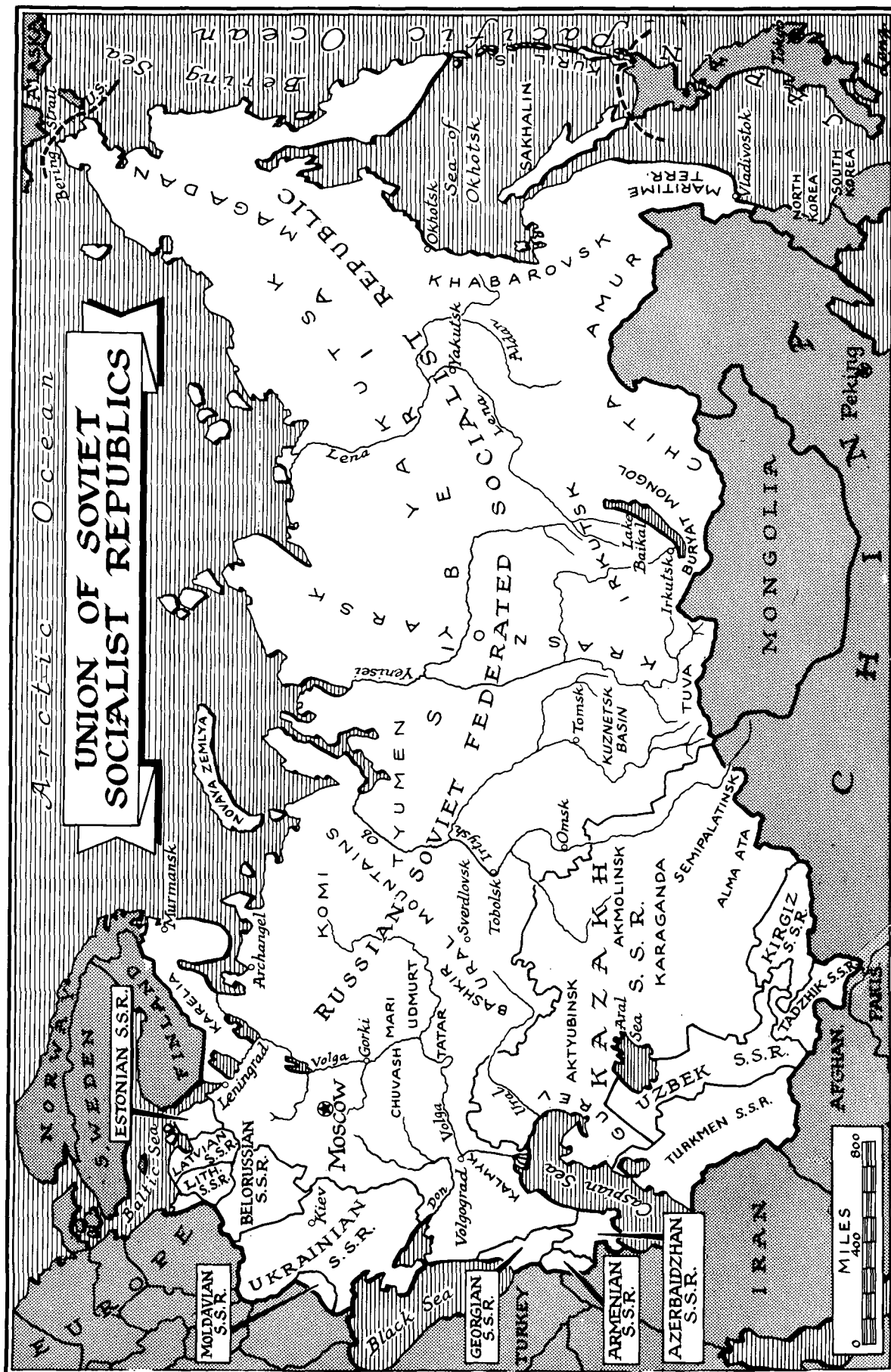
VATICAN

Aug. 18—Pope John Paul II ends his 12-day trip through sub-Saharan Africa with a speech to several hundred thousand people in Nairobi, Kenya.

VIETNAM

Aug. 14—The government turns over to the U.S. the remains of 26 U.S. soldiers killed in the Vietnam War.

Aug. 16—Foreign Minister Nguyen Co Thach says that Vietnam will not urge the United Nations General Assembly to seat the Heng Samrin Kampuchean government this year.



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